



UNIVERSITY OF CALCUTTA

DEPARTMENTAL ACADEMIC PROFILE

FACULTY PROFILE

Full name of the faculty member: DR. BINATA NAYAK

Designation: Associate Professor

Specialization: Food & Nutrition, Applied Nutrition



Contact information: 1 No. Jheel Par, Rabindranagar, P.O.Laskarpur,

Kolkata-700153

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Academic Qualifications:

College/University from which the degree was obtained	Abbreviation of the degree
University of Calcutta	B.Sc.(Food & Nutrition)
University of Calcutta	M.Sc.(Food & Nutrition)
NIN,Hyderabad	M.Sc. (Applied Nutrition)
University of Calcutta	Ph.D (Food & Nutrition)

Position held/holding:

Associate Professor

Research interests:

- Food Fortification
- Community Nutrition
- Dietetics
- Food & Nutrition Science
- Low cost nutritious food

Research guidance:

Number of researchers pursuing M.Phil. /Ph.D. degrees: 5

Projects:***Completed projects:***

- Development of New Nutraceutical Product for Nootropic and Antistress agent from indigenous plant beverage Black Tea (camellia sinensis)-A Pharmaco-Clinical Study. Agency: National Tea Research Foundation.
- Application of Innovative Ideas About Food Processing and Preservation of Underutilized & commonly available Fruits, Vegetables and their wastes. Agency: UPEII

Select list of Publications:**a) *Journals:***

- In vitro Bioavailability of Iron from wheat flour fortified with Ascorbic acid, EDTA and Sodium hexametaphosphate with or without iron. Published in the Journal of Food Chemistry, 80 (2003), p.545-550 by Elsevier.
 - Modulations or reproductive Hormones and functions with graded oral doses of Ocimum Sanctum (Tulsi) leaves extract on female albino rat. Indian J. Pharmacol. Vol.36, Supplement Dec, 2004.
 - National Challenges and Adventurous life style of Astronauts in Space. Journal of Indian Dietetic Association By Indian Dietetic Association. Vol.365, No.2012
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- Iron fortification of Green Gram dhal flour and its invitro Bioavailability as a preventive measure of anaemia. AIJRFANS, Issue 9, No. 1, Dec.14-Feb 15. PP:64-66
 - Nutrient & Anti-Nutrient change in Finger Millet (Eleusine Coracoma) during germination. IMJ, Vol. 109, No.6, June 15, PP: 465(A)-467(A)
 - Mushroom-The New Age Super Food. AIJRFANS 16-147, 2016, PP:42-46
 - Evaluation of Organoleptic Properties and Storage Capacity of Green Gram Dhal Flour (Vigna Radiata) Fortified with Iron and its absorption Promoters. AIJRFANS 16-134, 2016, PP: 26-29
 - Evaluation of Storage Capacity of Iron fortified Yogurt by Physico-Chemical, Chemical and Microbiological Analysis. IJEAB Vol.2, Issue-1, Jan-Feb 2017, PP:127-130
 - Impact of Vitamin D on Adiposity and Insulin Resistance Syndrome. International Journal of Biotechnology and Biomedical Sciences, Vol.4, Issue2, July-December, 2018, PP:83-88
 - Emergence and Growing Incidence of Coronary Heart Disease in India. AIJRFANS 19-209, 2019, PP:35-39
 - Consumers Perspective for the betterment of Street Food and Women Food Vendors in Kolkata. International Journal of Nutrition and Food Sciences, 2021; 10(4):89-94
- b) **Conference/seminar volumes:** ○ In vitro Bioavailability of Iron from Wheat flour fortified with Ascorbic Acid, EDTA and SHMP with or

without iron. Abstract in XXXIV Annual Meeting / Conference of the Nutrition Society of India, Bhopal, 2001, p.49.

- Changes of the Reproductive Behaviour of Albino rat with Herbal Medicine *Ocimum sanctum* (Tulsi). Abstract in XII Annual Conference of the Physiological Society of India, Kolkata, 2002 , (Abs. No. D-6).
- 3. Interference in Fertility function and changes in serum Luteinizing Hormone concentration in albino rat with special reference to Herbal Medicine *Ocimum sanctum* (Tulsi). Abstract in 90th Session of Indian Science Congress, Bangalore, 2003, Under Section Medical Science including Physiology, Part IV Late abs : p. 230-231

- Induction of Reproductive stress after administration of *Ocimum sanctum* (Tulsi) leaf extract in female albino rat. Abstract in National Seminar on Recent advances in Stress Physiology, Toxicology and Immunology. Organized by University of Kalyani, 2003, pp.SP-5.

- Modulation of Streptozotocin – stress induced Hyperlipidemic state of albino rat with herbal medicine *Ocimum sanctum*. Abstract in 91st Annual Conference of Indian Science Congress Association, 2004 , Chandigarh, Under Section Medical Science including Physiology, Part IV, Late Abs., p.242.

- Investigation of Glucose and Lipid profile in Streptozotocin induced Diabetic Rat. Abstract in 4th ANRAP (Asian Network of Research on Antidiabetic Plants) International Seminar, 2004, Kolkata, India, pp.38.
- Comparative Evaluation of Fertility Activities of Herbal Leaf Extract of *Azadirachta Indica* (Neem) and *Ocimum sanctum* (Tulsi) in albino rat. Abstract in 92nd Annual Conference of Indian Science Congress Association, 2005, Ahmedabad, under section Medical Science including Physiology, Part-IV, Late Abs. P.164.

- Modulations of Reproductive hormones and functions with graded oral doses of *Ocimum sanctum* (Tulsi) leaves extract on female albino rat. Abstract in Indian Journal of Pharmacology on XXXVII Annual Conference of Indian Pharmacological Society, Kolkata, 2005, p.59 (full text available at www.ijp.online.com)
- Changes of Ovarian 17 β -HSD and 17 α -HSD enzymes level after oral administration of *Ocimum sanctum* leaf extract in albino rat. Abstract in IABMS 2005, p.101.
- Effects of *Ocimum sanctum* of behavioural and hormonal modulation of pregnant and lactating albino rat. Abstract in IABMS 2005, p.118.
- Behavioural Modulation of Pregnant and Lactating, Albino rats with herbal medicine *Ocimum sanctum*. Abstract in 93rd Indian Science Congress, Hyderabad, 2006, under section Medical Science including Physiology, p.9.
- Effect of Oral administration of *Ocimum sanctum* Leaf Extract on reproductive Behaviour of Adult female albino rat. Abstract in ISCA, Hyderabad, 2006, p.11.
- The effects of *Ocimum sanctum* (Tulsi) and Reproductive Physiology and Maternal Behaviour in rat. Abstract in ISCA, Hyderabad, 2006, p.23.
- Modulation of Enzymatic and hormonal level in female reproductive system with herbal medicine *Ocimum sanctum*. Abstract in National seminar on “Home Science for better living in present Era.” On the occasion of the 150th Anniversary of Calcutta University and the Golden Jubilee Celebration of Viharilal College Campus, 2006, p.33.

- Behavioural and biochemical modulation of female pregnant and lactating albino rats after oral administration of *Ocimum sanctum* leaf extract. Abstract in National seminar on “Home Science for better living in present Era.” On the occasion of the 150th Anniversary of Calcutta University and the Golden Jubilee Celebration of Viharilal College Campus, 2006, p.35.

- Modulation of reproductive physiology of female albino rats with *Ocimum sanctum* (Tulsi) leaf extract. Abstract in National seminar on “Home Science for better living in present Era.” On the occasion of the 150th Anniversary of Calcutta University and the Golden Jubilee Celebration of Viharilal College Campus, 2006, p.36.

- Bye to side effects with herbal pills. (Hindusthan Times) Kolkata Live, Friday, 14th April, 2006, p.1) written by Tanya Bagchi.
- Effect of oral administration of *Ocimum sanctum* leaf extract on pregnant and lactating albino rat. Abstract in 94th ISCA, Annamalainagar, Chidambaram, 2007, p.9.

- Iron fortification of wheat flour – a preventive measure of iron deficiency anaemia. Published in Compendium of National symposium on problems of anaemia in India : Genetics and Environment – organized by Ramakrishna Mission SevaPratisthan, Vivekananda Institute of Medical Sciences, Kolkata during 30th Nov. to 1st& 2nd Dec., 2007.

- Effect of *Ocimum sanctum* (Tulsi) leaf extract on hormonal level and ovarian enzymatic level of female albino rat. Abstract in 94th ISCA, Annamalainagar, Chidambaram, 2007, p.10.

- Trypsin Inhibitor Content of some commonly Consumed pulses and the influence of Different methods of Cooking and Processing on it. Abs in proceedings of the 99th Indian Science Congress Under Medical Sciences Section.p-221,3-7 Jan,2012,Bhubaneswar.
- Healthy Heart Diet: The Basics. Abs in proceedings of the 99th Indian Science Congress Under Anthropological & Behavioral Sciences Section.p-363,3-7 Jan,2012,Bhubaneswar. ○Present scenario of oral cancer and it's prevalence.Abs in UGC sponsored National Seminar on Recent Trends in Research of Nutrition Sciences,organised by Dept of Food & Nutrition, Barrackpore Rastraguru Surendranath College in Collaboration with Dept of Food & Nutrition, West Bengal State Univ.p-21,22nd-23rd Feb'2012.
- Nutritional Challenges and adventurous lifestyle of astronauts in space. Abs. in Journal of Indian Dietetic Association.vol 36S,p105 ,Nov 2012.
- The importance of balancing the omega-6/Omega-3 Fatty acid ratio in diet to prevent cardiovascular and other chronic diseases. Abs in proceedings of the 100th Indian Science Congress Under Medical Sciences Section.p-232,3-7 Jan,2013, Kolkata.
- Enhancement of bioavailability of iron in Wheat Flour through fortification of iron and iron absorption promoters. Abs in proceedings of the 100th Indian Science Congress Under Medical Sciences Section.p-236,3-7 Jan,2013, Kolkata.
- Role of Nutrition and lifestyle management to protect against evils of Diabetic Retinopathy(DR). Abs in proceedings of the 100th Indian Science Congress Under Medical Sciences Section.p-237,3-7 Jan,2013, Kolkata.
- In Vitro bioavailability of iron and animal studies of wheat flour fortified with iron and iron absorption promoters. Abs in proceedings of the 100th Indian Science Congress Under Medical Sciences Section.p-245,3-7 Jan,2013, Kolkata.
- Evaluation of Potentiating effect of Black Tea(Camellia sinensis)Extract on stress induced different central nervous system

activities of laboratory animals. Abs in proceedings of the 100th Indian Science Congress Under Medical Sciences Section.p-434,3-7 Jan,2013, Kolkata.

- A Future prospect analysis of efficacy and cost effectiveness of curcumin in breast cancer management. NSI, 2015.

- Impact of Vitamin D an Adiposity and Insulin Resistance Syndrome. International Conference on Agriculture and Allied Sciences, The Productivity, Food Security and Ecology. Organised by Dept. of Agricultural Extension, BCKV and KrishiSanskriti, New Delhi, India.

- A Survey on Students (adolescents) Perspective on Junk Food. National Conference on Food and Nutrition Security- Thus Far and Further. Organized by NSI Calcutta Chapter.

- Junk Food and Nutrition Insecurity Among Children and Adolescents in Kolkata. ISEE National Seminar,2018. Organized by Indian Society of Extension Education.

- Food Fortification: A trendy Scientific approach for controlling micronutrient malnutrition. ISEE National Seminar, 2018. Organized by Indian Society of Extension Education.

- Nutrition Dynamics: The Shift in dietary pattern of Indian women towards non-communicable diseases. National Conference Food and Nutrition Security- Thus Far and Further, 2018. Organized by NSI, Calcutta chapter.

- Effectiveness of Iron fortified green gram dhal (vigna radiate) and natural iron absorption promoter in haemoglobin status of adolescent girls. National Conference Food and Nutrition Security- Thus Far and Further, 2018. Organized by NSI, Calcutta chapter.

- Fortification: A preventive measure of hidden hunger. National Conference Food and Nutrition Security- Thus Far and Further, 2018. Organized by NSI, Calcutta chapter.

- Black Rice: A Boom for Health. National Conference Food and Nutrition Security- Thus Far and Further, 2018. Organized by NSI, Calcutta chapter.

- Modification in the haemoglobin status of adolescent girls after treating with iron fortified green gram dhal (vigna radiate) and natural absorption promoter with normal diet. National Conference Food and Nutrition Security- Thus Far and Further,2018. Organized by NSI, Calcutta chapter.

- Forbidden rice: the neglected 'Black Diamond'. National Conference Food and Nutrition Security- Thus Far and Further,2018. Organized by NSI, Calcutta chapter.

- Junk Food and Nutrition Insecurity among children and adolescents in Kolkata. NSI,2018. Organized by Nutrition Society of India.

Membership of Learned Societies :

- Nutrition Society of India
- Indian dietetic Association
- Indian Science Congress Association

Invited lectures delivered :

- Invited lecture by UGC sponsored national seminar at Womens college in collabotoin with VidyasagarUniv on topic Healthy heart diet: the basics., 23rd September2011
- Invited lecture by BarrackpurRastraguruSurendranath College for National Nutrition Week Celebration on topic Nutrition for our life 9th September 2011

- Invited lecture by Barrackpur Rastraguru Surendranath College for UGC Sponsored National Seminar on topic Nutrition-A life cycle approach, 22-23 Feb., 2013
- Invited lecture by The Indian Association for Parenteral and Enteral Nutrition for National Conference on Surgical Nutrition on topic Parenteral and enteral Nutrition 19th Dec., 2013
- Invited lecture by Marico Ltd. and IDA Bengal Chapter for National Nutrition Week on topic Combating Malnutrition 6th September., 2014
- Invited lecture by IDA for National Breast Feeding Week Celebration on topic Role of our society for the management of childhood malnutrition 3rd August., 2014
- Invited lecture by Bhangar Mahavidyalay on topic Child Malnutrition 18th November., 2014
- Invited lecture by ICDS Garden reach for Better Nutrition: Key to Development on topic Impact of Food & Nutrition on Growth & Development 18th September, 2015
- Invited lecture by IDA Bengal Chapter for Scientific Seminar on Dr. Amiya Bose Memorial Oration 20th March., 2016
- Invited lecture by Behala College for this seminar Prevention and treatment of Nutritional Deficiency on Nutrition-A life cycle approach 17th March 2017
- Invited lecture by Indian Science Congress Association for 106th ISCA on topic Food Fortification – The Technology Developed to improve hidden hunger for future India 3rd-7th January 2019
- Invited lecture in webinar organized by Rotary Club of Calcutta, topic-Staying Healthy with Immunity Boosting Food on 8th August, 2020

- Invited lecture in webinar organized by The Dept of Allied health Science, Brainware University, Rastriya Poshan Maah Celebration, 29th Sept, 2020

Chaired Session:

- International conference on Agriculture and Allied Science: The Productivity, Food Security and Ecology organised by BCKV and KrishiSanskriti , New Delhi 13th& 14th August 2018
- One day National Conference on Food & Nutrition Security: Thus Far and Further organised by NSI, Calcutta chapter 15th September 2018
- National conference by Indian Society of Extension Education organised by ISEE and WBUAFS 5th-7th December 2018
- 33rd Sunday Webinar by Rabindrik Psychotherapy Research Institute Trust, Focal Theme: Safe Nutrition in Early Childhood, on 7th March 2021.

Awards :

- Received National Award (K. Ram Nathan Award) for best research paper presentation during the XXXIV Annual Meeting/ Conference of Nutrition Society of India on 5th and 6th Dec, 2001 at Bhopal.
- Received Gold Medal (Vidyasagar University Medal) for best research paper (poster) presentation during the XIII Annual Conference of the Physiological Society of India held on 23rd-24th Feb, 2002 at Kolkata.
- Nominated for Gufic Prize Award session by Indian Pharmacological Society, 2005.
- Best Paper Presentation Award (oral categories) in International Conference organised by Dept. of Agricultural Extn, BCKV and KrishiSanskriti, New Delhi 13th and 14th Aug., 2018
- Best Paper Presentation Award (oral) by in National Seminar organized by NSI, Calcutta Chapter 15th Sept., 2018
- Best Paper Presentation Award (oral) in ISEE National Seminar 5th, 6th, 7th Dec., 2018