

Dr. Suchismita Roy

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CURRENT POSITION:

Assistant Professor of Nutrition, Department of Paramedical and Allied Health Sciences
(August 2017 to present) Midnapore City College, Kuturiya,
Bhadutala, 721129, Midnapore, West Bengal, India

EDUCATION:

Ph D- 2018, Vidyasagar University, West Bengal, India

Thesis entitled '**Effect of root extracts of *Asparagus racemosus* on acetaminophen induced renal failure male rats**'.

Research area: Nutraceuticals and functional foods the management of oxidative stress, liver and kidney diseases.

Post graduation (M. Sc.) - 2010, Nutrition and Dietetics, Vidyasagar University, West Bengal, India

Under graduation - 2008, Nutrition, Vidyasagar University, West Bengal, India

AWARDS:

National

1. Gold medal award as UG 1st Rank holder, Vidyasagar University-2008
2. Gold medal award as PG 1st Rank holder, Vidyasagar University-2010
3. DST INSPIRE Fellow, Department of Science and Technology, Govt. of India, 2012
4. Prof Sacchidananda Banerjee memorial Research Prize award, by Physiological Society of India, 2015

International:

1. Newton Bhabha short term Ph D fellow at Plymouth University, UK, by Department of Science & Technology, Govt. of India and British Council, UK, 2016.

RESEARCH GRANTS:

Sl No	Title	Funded by	PI or Co PI	Duration (year)	Sanctioned Amount	Status
1.	Early detection of kidney dysfunction and identification of bioactive phytochemical(s) from <i>Asparagus racemosus</i> roots for protection of renal failure in rats	Indian Council of Medical Research	PI	3 (2021)	Rs. 4401834.00	Running

RESEARCH EXPERIENCE:

- **As DST INSPIRE Fellow (2012-2017):** Herbal drug development for the management of kidney diseases and liver dysfunction, Probiotic and functional foods for treatment of kidney diseases, Phytochemical analysis by Thin layer chromatography and HPLC, In vivo experiments on rat model for studying liver and kidney injury by biochemical, hematological, histological studies, Microscopic analysis, ELISA technique, flow cytometry and gel electrophoresis.
- **As Newton Bhabha Short term Ph D fellow, 2016:** Working on ‘Iron and oxidative stress in type 2 diabetes and renal disease – the development of methods to study the effects of protein glycation on red blood cell membranes’. The experiment was related to work on human sample.

TEACHING EXPERIENCE:

- Guest teacher at Dept. of Nutrition, Raja N L Khan Women’s College, Midnapore on & from 1st September, 2010 to 10th January, 2013.
- Assistant Professor of PG Nutrition & Dietetics, and Food Science & Nutrition from 1st August, 2017 to till date at Midnapore City College.

RELATED PROFESSIONAL EXPERIENCE:

1. **Organizing member** and faculty mentor of DST INSPIRE Internship Science Camp on & from 19th to 23rd Dec, 2012 at Raja N. L. Khan Women’s College, Midnapore, WB, India.
2. **Organizing member** and faculty mentor of DST INSPIRE Internship Science Camp on & from 26th to 30th Dec, 2015 at Raja N. L. Khan Women’s College, Midnapore, WB, India.
3. **Convener** of two day national Level Seminar on “Role of Basic Sciences on Translational health” held at Midnapore City College, sponsored by DST SERB on 5th and 6th February, 2018.
4. **Joint organizing Secretary** of two day National Level seminar on “Environmental Change:

Adaptation challenges by sustainable development” held at Midnapore City College, sponsored by ICMR and DBT on 13th and 14th July,2018

5. **Organizing Secretary** of two day National Level Conference MCCC CON on, Academia-Industry meets on opportunity and challenges on foodomics in functional food preparation based industrial process” held at Midnapore City College, sponsored by DST SERB and DBT, Govt of India on 5th and 6th February,2019.
6. **Examiner, paper setter, evaluator** of many examinations under different college and universities.

RESEARCH AND TEACHING INTERESTS:

Nutraceuticals and functional foods for a healthy life style, Pharmacology and drug development, Food processing, composition and analysis, Human physiology, Therapeutic dietary guidelines, Sports nutrition, Community nutrition therapy, Medical nutrition therapy.

SKILLS AND TECHNIQUES:

- ELISA Technique
- HPLC analysis
- Flow cytometry
- Gel electrophoresis
- Chromatographic analysis
- Biochemical, Hematological and Histological analysis
- Single cell separation
- Food composition analysis
- Phytochemical analysis
- Statistical software including SPSS and Origin
- Laboratory experiments related to Undergraduate and post graduate course in nutrition

PROFESSIONAL MEMBERSHIP:

Life member of the Physiological Society of India

PARTICIPATION IN SEMINARS / WORKSHOPS/ CONFERENCE:

1. Attending National Seminar cum workshop on “**Application of Advance Techniques in Biomedical Laboratory Science**” as paper presenter on & from 25th to 29th March, 2011, at Dept of Bio Medical Lab. Science & Management, Vidyasagar University, Midnapore, West Bengal.2011.
2. Poster presentation at XXIII Annual National Conference of Physiological Society Of India, “**Physicon2011**” held at NRI Medical College & Hospital,Vijaywada, A.P.2011.
3. Oral presentation at National seminar on “**Food and Nutrition in Community Health: Rural Perspective of West Bengal**” on 17th to 18th February, 2012 at Dept of Nutrition, Mahisadal Girls College. Mahisadal, Purba Medinipur, W.B,2012.
4. Oral presentation at National Seminar on “**Modern Trends in Life Sciences**” on 17th to 18th March, 2012 at Dept. Of Nutrition, Microbiology, Physiology, Zoology and Botany, Raja N. L. Khan Women’s College, Midnapore.2012.

5. Attending National seminar on “**Research Methodology in Higher Education**” on 19th March, 2013 at Vidyasagar University. Midnapore, West Bengal, India.
6. Participating national level workshop on “**Current trends of Biological Research at crossroads of Science**” on & from 17th to 23rd May, 2013 at the BIF center, Dept. of Microbiology, Vidyasagar University.
7. Oral presentation at national level on “**Food fortification in community health: rural perspective of India**” on & from 21st to 22nd January, 2014 at Dept. of Nutrition, Mahishadal Girls College, Mahishadal, Purba Medinipur, W.B.
8. Poster presentation at “**102nd Indian Science Congress (Medical sciences including Physiology)**” on & from 3-7th January, 2015 at Mumbai university, Santacruz, Mumbai, India.
9. Oral presentation at national level seminar on “**Community metabolic Disorder and dietary therapeutic approaches**” on & from 22-23rd December, 2014 & got the 1st prize at dept. Of Nutrition, Raja N. L Khan Women’s College, Midnapore, West Bengal, India.
10. Participating in the hands on workshop on ‘**Flow cytometry**’ on and from 27th to 28th April, 2015 at Cytometry Solutions Pvt. Ltd, Kolkata, Saltlake, India.
11. Oral presentation on ‘**Management of kidney disease through phytotherapy and functional foods**’ on 19th September, 2015 at the national seminar on ‘Bridging the gap between nutrition and Microbiology’ held at Raja N L Khan Women’s College, Midnapore, West Bengal, India.
12. Oral presentation on ‘**Roots of *Asparagus racemosus* prevents acetaminophen induced hepatorenal toxicity in rats**’ at the **FIPSPHYSICON- 2015** for Prof. Sachhidananda Banerjee Memorial research award on & from 18-20th December, 2015, University of Calcutta, Kolkata.
13. Poster presentation on ‘Protein glycation and haemolysis: development of a study into the effect of glucose incubation on human red blood cells’ at **European Iron Club Meeting, Innsbruck, Austria, 6-10th April, 2016.**
14. Oral presentation on ‘**Efficacy of *Asparagus racemosus* on apoptosis of human mammary epithelial carcinoma cells**’ at the national seminar on & from 12th to 13th August, 2016 on „**Trends in Nutrition Research and Education and its Prospect**“ held at Raja N L Khan Womens College, Midnapore, West Bengal, India.
15. Participated in ‘Newton Bhabha Ph D Fellows meet’ and ‘India UK Tech Summit’ at on 8th November, 2016 at British Council, New Delhi and Taj Palace, New Delhi.
16. Participation at national Level Seminar on ‘Role of Basic Sciences on Translational health’ held at Midnapore City College, sponsored by DST SERB on **5th and 6th February, 2018.**
17. Oral presentation at two day National Level seminar on ‘Environmental Change: Adaptation challenges by sustainable development’ held at Midnapore City College, sponsored by ICMR and DBT on **13th and 14th July, 2018**
18. Participate in two day National Level Conference MCCCION on ‘Academia-Industry meets on opportunity and challenges on foodomics in functional food preparation based industrial process’ held at Midnapore City College, sponsored by DST SERB and DBT, Govt of India on **5th and 6th February, 2019.**
19. Presentation at XXXIst Annual Conference of The Physiological Society of India on the theme “**Recent Trends in Physiology and Healthcare Research for Salubrious Society**” at Bankura Christian College on 15-17 November 2019.
20. Oral presentation at the National conference of the Physiological society of India on 15-17th

November, 2019 at Bankura Christian College, Bankura, West Bengal.

PUBLICATIONS IN NATIONAL AND INTERNATIONAL JOURNALS:

1. **Roy S.** Mechanism of drug induced renal failure: a review, International Journal of Pharmaceutical Sciences and Research. 2020; 11(8): 1000-1008.
2. **Roy S,** Pradhan S, Mandal S, Das K, Nandi DK. Nephroprotective potential of *Asparagus racemosus* roots on acetaminophen induced renal injured in rats, Acta Biologica Szegediensis, 2018, 61(1): 17-23
3. Samanta A, Patra A, Mandal S, **Roy S,** Das K, Kar S, Nandi DK. Hypoxia: A Cause of Acute Renal Failure and Alteration of Gastrointestinal Microbial Ecology. Saudi J Kidney Dis Transpl 2018;29(4): 879-888.
4. Mandal S, Patra A, Pradhan S, **Roy S,** Samanta A, Das K, Chattopadhyay A and Nandi DK. Nephro-protective activity of isolated methanol fractions phyto-compound from bark of *Terminalia arjuna*. Int J Pharm Pharm Sci. 2017, 9 (12);175-180.
5. Mallick S, Mandal M, **Roy S,** Pradhan S, Mandal S, Maiti RK, Nandi DK, Dasgupta R and Das K. Effect of phytosterol extract from sesame seed on experimentally induced hyperlipidemic rats: dose dependent study. Int J Pharm Bio Sci. 2016; 7(1): 370 – 377.
6. Das K, **Roy S,** Mandal S, Pradhan S, Debnath S, Ghosh D, Nandi DK. Renal protection by isolated phytochemicals from *Terminalia arjuna* bark fraction on dehydration induced uremia, oxidative stress and kidney disease rats. International Journal of recent Scientific Research. 2016, 7(10);13787-13795.
7. Pradhan S, **Roy S,** Mandal S, Das K, Das S, Nandi DK. Protective effect of alpha-lipoic acid on hepato renal toxicity on acetaminophen induced uremic male albino rat. European journal of biomedical and pharmaceutical sciences. 2016; 3(5):668-674.
8. Mandal S, Samanta A, Patra A, Pradhan S, **Roy S,** Das K, Chattopadhyay A, Nandi DK. A comparative assessment of phytochemical screening, antioxidant and antimicrobial activities between leaf and dust of black tea extracts. International Journal of Research in Ayurveda and Pharmacy. 2016; 7(6); 90-95.
9. Nandi DK, Mandal S, **Roy S,** Pradhan S, Samanta S, Patra A, Mandal A, Das K and Sinha B. Protective Role of Selected Probiotics on Experimentally Induced Kidney Failure in Rats. International Research Journal of Basic and Applied Sciences. 2016;1(2):29-36.
10. Mandal A, Patra A, Mandal S, **Roy S,** Mahapatra SD, Mahapatra TD, Paul T, Das K, Mandal KC, Nandi DK. Therapeutic potential of different commercially available synbiotic on acetaminophen-induced uremic rats. Clinical and Experimental Nephrology. 2015; 19(2): 168-77.
11. **Roy S,** Pradhan S, Das K, Mandal S, Mandal A, Patra A, Samanta A, Sinha BD, Nandi DK. Acetaminophen induced kidney failure in rats: A dose response study. Journal of Biological Sciences, 2015; 15 (4):187-193.
12. **Roy S,** Das K, Mandal S, Pradhan S, Patra A, Samanta A, Mandal A, Kar S, Nandi DK. *Asparagus Racemosus* Roots Ameliorates Acetaminophen Induced Hepatotoxicity in Rats: An Experimental, Biochemical and Histological Study. International journal of recent scientific research. 2014; 5(6): 1192-97.

13. **Roy S**, Das K, Mandal S, Pradhan S, Patra A, Samanta A, Sinha BD, Kar S, Nandi DK. Phytochemical analysis, antimicrobial activity and assessment of potential compounds by thin layer chromatography of ethanol fraction of *Asparagus racemosus* roots. International journal of pharmacy and pharmaceutical sciences. 2014; 6(8): 367-70.
14. Patra A, Mandal A, **Roy S**, Mandal S, Mandal KC, Nandi DK. Protective effect of selected urease positive lactobacillus strain on acetaminophen induced uremia in rats. Biomedicine and preventive nutrition. 2014; 4:271–6.
15. Patra A, Mandal A, Samanta A, Mahapatra TD, Mandal S, **Roy S**, Pradhan S, Nandi DK, Mandal KC. Therapeutic effect of *Streptococcus thermophilus* (MTCC 1938) on acetaminophen induced uremia in experimental rats. Indian Journal of Biotechnology. 2014; 13: 318-23.
16. Pradhan S, **Roy S**, Mandal S, Samanta A, Patra A, Das K, Das S, Nandi DK. Alpha-Lipoic Acid A Cholesterol Reducer for Targeting Acetaminophen Induced Uremic Male Albino Rat Models. International Journal of Pharmaceutical Sciences Review and Research. 2014; 29(1): 62-6.
17. Samanta A, Mandal A, Patra A, Mandal S, **Roy S**, Pradhan S, Das K, Nandi DK. Impact of probiotic supplementation on intestinal microflora of rat under environmental hypobaric pressure. International journal of current microbiology and applied sciences. 2014; 3(8); 282-91.
18. **Roy S**, Das K, Mandal A, Mandal S, Pradhan S, Nandi D. Crude extract from root of *Asparagus racemosus* ameliorates acetaminophen induced uremic rats. International Journal Of Pharmaceutical Sciences and Research. 2013; 4(8): 3004-12.
19. Mandal A, Nandi DK, **Roy S**, Das K, Mandal KC. In Vivo Assessment Of Bacteriotherapy On Acetaminophen Induced Uremic Rats. Journal of Nephrology. 2013; 26(1): 228-36.
20. Mandal A, Paul T, **Roy S**, Mandal S, Pradhan S, Mandal KC, Nandi D. Effect of Newly Isolated Lactobacillus Ingluviei ADK10 From chicken Intestinal Tract on acetaminophen induced oxidative stress in wistar rats. Indian Journal of Experimental Biology. 2013; 51: 170-80.
21. Pradhan S, Mandal S, **Roy S**, Mandal A, Das K, Nandi DK. Attenuation Of Uremia By Orally Feeding Alpha –Lipoic Acid On Acetaminophen Induced Uremic Male Rats. Saudi Pharmaceutical Journal. 2013; 21: 187–92.
22. Mandal A, **Roy S**, Das K, Mandal S, Pradhan S, Mandal KC, Nandi DK. Assessment of efficacy of a potential probiotic strain and its antiuremic and antioxidative activities. e-SPEN Journal. 2013; 8(4): 155-63.
23. Mandal A, Paul T, **Roy S**, Mandal S, Pradhan S, Das K, Mandal KC, Nandi DK. Therapeutic potential of Lactobacillus ingluvieiADK10, a newly established probiotic organism against acetaminophen induced uremic rats. Biologia. 2013;68(6):1072-8.
24. Mandal S, Patra A, Samanta A, **Roy S**, Mandal A, Mahapatra TD, Pradhan S, Das K, Nandi DK. Analysis of phytochemical profile of *Terminalia arjuna* bark extract with antioxidative and antimicrobial properties. Asian Pacific Journal of Tropical Biomedicine, 2013; 3(12): 960-966.

Reference:

1. Dr Dilip Kumar Nandi Associate Professor and HOD Dept of Physiology, Raja N L Khan Womens College Midnapore, Paschim Medinipur, West Bengal, India,721102, E mail- dilipnandi2004@yahoo.co.in, Phone- +919434229882.
2. Prof. Debidas Ghosh, Professor and HOD, Dept. of Biomedical Lab Science and Management, Vidyasagar University, Midnapore, Paschim Medinipur, West Bengal, India, E mail- debidas_ghosh@yahoo.co.in, Phone- 9232690993
3. Dr Sanjay Kar, Assistant Professor, Dept. of Botany, Midnapore College (Autonomous), Paschim Medinipur, West Bengal India, 721102 E Mail- sanjaykarmid@gmail.com, Phone- +919434321427