

## Biographical Sketch



### Jana Chakrabarti

*M.Sc., M. Tech. (Biotech), PhD,  
UGC Raman Fellow*

#### Designation:

Associate Professor  
Department of Zoology

#### Present Affiliation:

Acharya Prafulla Chandra Roy Government College, Siliguri, West Bengal, India (From 2016 – till date)

**Teaching Experience:** Undergraduate: 2001 - till date      Postgraduate: 2007 – 2015

#### Colleges Served:

1. Erstwhile Presidency College, Kolkata, West Bengal, India (2009 – 2016)  
(Department of Biotechnology)
  2. Maulana Azad College, Kolkata, West Bengal, India (2007 – 2009)
  3. Krishnagar Government College, Nadia, West Bengal, India (2002 – 2007)
  4. Nabadwip Vidyasagar College, Nadia, West Bengal, India (2001 – 2002)
- Worked as Academic Counselor of Indira Gandhi National Open University (IGNOU) 2007- 2009

#### Area of Interest:

Classical & Applied Zoology, Molecular & Reproductive Endocrinology, Cell Biology and Medical Biotechnology

I completed my Postgraduation (M.Sc.) in Zoology from the University of Calcutta with specialization in Endocrinology in 1995 and did my M. Tech. in Biotechnology from Jadavpur University in 1998.

My research work was conducted in the Reproductive Biology Research Division, Indian Institute of Chemical Biology, Kolkata in collaboration with the Institute of Reproductive Medicine, Salt Lake, Kolkata, West Bengal, India. It deals with the precise regulatory role of an adipocyte derived polypeptide hormone 'leptin' in the maintenance of ovarian functions for which I was awarded PhD from Jadavpur University in 2007.

I was awarded Raman Post-Doctoral Research Fellowship for Indian Scholars in USA for the year 2014-15 funded by the University Grants Commission (UGC) and done my Post-Doctoral Research work in The Armed Forces Radiobiology Research Institute (AFRRI), Uniformed Services University of the Health Sciences (USUHS), Bethesda, MD 20889, USA.

I started my teaching career as Lecturer in Zoology in 2001 and since 2002; I am associated with West Bengal Education Services (WBES), Government of West Bengal.

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## Research Activities:

**I. Title of PhD Thesis:** *'Evaluation of Precise Regulatory Role of Leptin in the Maintenance of Ovarian Functions'*.

**II. Area of Postdoctoral Research:** *'Radioprotective Efficacy and Mechanism of Radioprotection Using Cell Culture and Mouse Model'*.

## III. Research Interests:

1. Reproductive endocrinology with special reference to patho-physiological conditions that includes development of suitable animal models, elucidation of basic regulatory mechanisms and molecular basis pertaining to pathogenesis of different reproductive disorders.
2. Nutritional biochemistry & biotechnology that involves isolation, characterization & evaluation of bioactive potential of peptides and development of functional food.

**IV. PhD guidance:** Dr. Ankhi Halder awarded PhD degree in 2019 from the University of Calcutta. [Department of Home Science (Food & Nutrition Division), Viharilal College Campus, Alipore, Kolkata, West Bengal, India].

## V. Research projects carried out:

Title of the Project	Name of the Funding Agency	Duration	Remarks
<b>Minor Research Project:</b> Evaluation of the Precise Regulatory Role of Leptin in the Maintenance of Ovarian Function.	University Grants Commission (UGC) F. PSW- 028/03-04(ERO) Rs. 95,000/-	2 years (2004-'06)	Completed
<b>Major Research Project:</b> 'Molecular Characterization and Evaluation of Bioactive Peptides from <i>Lamellidens marginalis</i> for Application against Hypertension and Oxidative Stress'.	University Grants Commission (UGC) F. 42-214/2013(SR) Sanctioned: Rs.12, 25,800/- Released: Rs. 8,49,300/-	2 years (2013-'15)	Completed

## VI. Publications in Research Journals:

1. Madhushrita Das, Ankhi Halder, Roshni Chatterjee, Aditi Gangopadhyay, Tanmoy K. Dey, Souvik Roy, Pubali Dhar, **Jana Chakrabarti**. *In vitro* Structure-Activity Relationship Study of a Novel Octapeptide Angiotensin-I Converting Enzyme (ACE) Inhibitor from the Freshwater Mussel *Lamellidens marginalis*. *International Journal of Peptide Research and Therapeutics*; 2023, Vol. 29(18); 1-10.
2. Haldar Ankhi, Das Madhushrita, Dey Tanmoy K, Dhar Pubali, **Chakrabarti Jana**. Isolation of an Antihypertensive Bioactive Peptide from the Freshwater Mussel *Lamellidens marginalis*. *International Journal of Food and Nutritional Sciences*; 2022; Vol. 11(1); 1-8.
3. Sarkar D and **Chakrabarti J**. Bioactive potential of the spice blend ‘Bengali Garam Masala’: an overview. *International Journal of Biology, Pharmacy and Allied Sciences (IJBPAS)*; 2020; Vol. 9 (9); 2315-2336.
4. **Jana Chakrabarti**. Serum leptin levels in menopause and impact of hormone replacement therapy. *International Journal of Research and Analytical Reviews (IJRAR)*; 2019; Vol.6 (2); 361-365.
5. **Jana Chakrabarti**. Serum pattern of circulating leptin during menstrual cycle: relationship to estradiol and progesterone. *Journal of Biological and Chemical Research (JBCR)*; 2019; Vol.36 (1), Part C; 48-55.
6. Ankhi Haldar, Madhushrita Das, Roshni Chatterjee, Tanmoy Kumar Dey, Pubali Dhar & **Jana Chakrabarti**. Functional properties of protein hydrolysates from freshwater mussel *Lamellidens marginalis* (Lam.). *Indian Journal of Biochemistry and Biophysics (IJBB)*; 2018; Vol.55 (2); 105-113.
7. Shaoni Bhattacharjee & **Jana Chakrabarti**. Assisted reproductive technology (ART) and imprinting disorders: Epimutation in gametes as a functional cause. *ISSRF Newsletter (A publication of the Indian Society for the Study of Reproduction and fertility)*; September 2014; Issue: 15; 19-22.
8. Ankhi Haldar, Tanmoy Kumar Dey, Pubali Dhar & **Jana Chakrabarti**. Exploring the Nutritive Values of the Freshwater Mussel *Lamellidens marginalis* as Potential Functional Food. *IOSR-Journal of Environmental Science, Toxicology and Food Technology (IOSR-JESTFT)*; 2014; Vol. 8 (8); 1-7.
9. Shaoni Bhattacharjee & **Jana Chakrabarti**. Understanding of ‘Addiction’ at Cellular Level in Relation to Behavioural Epigenetics. *The Beats of Natural Sciences*; 2014; Vol.1 (1); 1-7.
10. **Jana Chakrabarti**. Serum leptin level in women with polycystic ovary syndrome: correlation with adiposity, hyperinsulinemia and circulating testosterone. *Annals of Medical and Health Sciences Research*; 2013; Vol.3 (2); 191-196.

11. **Jana Chakrabarti**, Ratna Chatterjee, Sourendrakanta Goswami, Baidyanath Chakravarty and Syed Nazrul Kabir. Overt leptin response to controlled ovarian hyperstimulation negatively correlates with pregnancy outcome in *in vitro* fertilization-embryo transfer cycle. *Journal of Human Reproductive Science*; 2012; Vol. 5(2), 194-199.

12. **Jana Chakrabarti**, Ratna Chatterjee, Sourendrakanta Goswami, Baidyanath Chakravarty and Syed Nazrul Kabir. Dynamic secretory profile of leptin and its impact during controlled ovarian hyperstimulation; *Asian J. Exp.Biol.Sci*; 2012; Vol 3(3); 629-636.

13. **Jana Chakrabarti**. Probiotics for Sustainable Aquaculture: An Overview; *Academic Spectrum*, 2011; Vol 2, No. 2; 101-115.

14. Bandopadhyay S, **Chakrabarti J**, Banerjee S, Goswami SK, Chakravarty BN, Kabir SN. Galactose Toxicity in the Rat as a Model for Premature Ovarian failure: An Experimental Approach Re- Addressed. *Journal of Human Reproduction*; 2003; Vol.18 (10); 2031-2038.

15. Bandopadhyay S, **Chakrabarti J**, Banerjee S, Pal AK, Goswami SK, Chakravarty BN, Kabir SN. Prenatal Exposure to High Galactose Adversely Affects Initial Gonadal Pool of Germ Cells In Rats. *Journal of Human Reproduction*; 2003; Vol.18 (2); 276-282.

### **Books Chapters:**

1. **Jana Chakrabarti** and Madhushrita Das. ‘RNA Interference (RNAi): An approach to Plant Protection and Crop Improvement: A Review’ (chapter 16) on the book *Biotechnology in Plant Protection and Crop Improvement*, 2020; 271-292; publisher: Discovery Publishing House Pvt. Ltd. New Delhi; *edited by*: Dr. M.M. Abid Ali Khan et.al. (ISBN: 978-93-88854-23-8).

2. Subir Ch. Dasgupta, **Jana Chakrabarti** and Suman Das. Study Material for Postgraduate Zoology (Paper: PGZO-6; Group: A(II); Biotechnology; Author of the Chapter: 1;(Principles of Assay of DNA, RNA, Western, Southern, Northern Blotting; 1-16 ), Chapter: 6 (Elementary idea of Cryopreservation; 77-92), Chapter:7(Molecular Separation Techniques; 93-131) & Chapter: 8(Immunological Techniques; 132-151) for Netaji Subhas Open University, West Bengal, India; 2009; *edited by*: Prof. S.K. Dey.

3. Pubali Dhar and **Jana Chakrabarti**. ‘Biotechnology: A dream or a nightmare’ on the book *Combating Disaster: Perspectives in the New Millennium*, 2006; 49-53; publisher: acb publications and krishnagar Government College, Nadia, West Bengal, India; *edited by*: A. Banerjee, B. Mallick, D. Sarkar, et.al. (ISBN: 81-87500-29-8).

- Co-editor of the book ‘Combating Disaster: Perspectives in the New Millennium; published jointly by acb publications and krishnagar Government College, 2006.

## VII. Conference Proceedings (Full Paper):

1. M. U. Rahman, **J. Chakrabarti**, D. Sarkar. *Gender Budgeting and Entrepreneurship: A Policy Mix for Women Empowerment in India* in the Tenth Biennial Conference on Entrepreneurship, February 20-22, 2013, organized by the Entrepreneurship Development Institute of India, Ahmedabad, Gujarat, India. Vol. II; 843-862; Publisher: EDI & Bookwell, Delhi; ISSN: 978-93-80574-47-9.

2. M. U. Rahman, D. Sarkar, A. Sarkar, S Paul, **J. Chakrabarti** and B. Singh. *Indian jute Industry: Its crises-need for Entrepreneurial Interventions*; in the Ninth Biennial Conference on Entrepreneurship, February 16-18, 2011, organized by the Entrepreneurship Development Institute of India, Amhedabad, Gujarat, sponsored by Centre for Research in Entrepreneurship Education and Development (CREED).

## VIII. Presentations in Conference/ Seminar/ Symposia:

1. **Jana Chakrabarti**. *Heavy Metals as Endocrine Disrupters: Impacts on Human Health* in the International Conference (Virtual) on Biotechnology & Biological Sciences (Biospectrum 2022), November 5-7, 2022; organized by the Department of Biotechnology, University of Engineering & Management, Kolkata in association with International Union for Conservation of Nature (IUCN-CEM) & Smart Society, USA.

2. **Jana Chakrabarti**. *Impact of Endocrine Disrupting Chemicals on Female Reproductive Health* in the International Conference (Virtual) on Biotechnology & Biological Sciences (Biospectrum 2021), November 18 – 20, 2021; organized by the Department of Biotechnology, University of Engineering & Management, Kolkata in association with the Indian Ecological Society, Microbiologists Society & Smart Society, USA.

3. **Jana Chakrabarti**. *Role of Natural Polyphenols in Neuroprotection: an Overview* in the International Conference (Virtual) on Biotechnology & Biological Sciences (Biospectrum 2020), November 19-21, 2020; organized by the Department of Biotechnology, University of Engineering & Management, Kolkata in association with the Indian Ecological Society, Microbiologists Society & Smart Society, USA.

4. **Jana Chakrabarti**. *Elevated Serum Leptin in Controlled Ovarian Hyperstimulation Adversely Affects Pregnancy Outcome during in vitro Fertilization and Embryo Transfer* in the World Congress on Reproductive Health with Emphasis on Reproductive Cancers, Infertility and Assisted Reproduction & 30<sup>th</sup> Annual General Meeting of the Indian Society for the Study of Reproduction and Fertility (ISSRF), February 14-16, 2020; organized by Shri Mata Vaishno Devi University (SMVDU), Jammu, India.

5. **Jana Chakrabarti**, Ankhi Haldar, Madhushrita Das. *Functionality Analyses of Protein Hydrolysate from the Freshwater Edible Mussel *Lamellidens marginalis* as a Potent Source of Functional Food* in the International Conference on Biotechnology & Biological Sciences: (Biospectrum 2019), August 8-10, 2019; organized by The Department of Biotechnology, University of Engineering & Management, Kolkata in association with the Institution of Engineers, India.

6. **Jana Chakrabarti**, Madhushrita Das, Ankhi Haldar, Tanmoy Kumar Dey, Roshni Bhattacharya, Pubali Dhar. *In Vitro Studies on the Bioactive Potential of Lamellidens Protein Hydrolysate as Nutraceutical* in the International Conference celebrating 100 Years of Zoology (INTZOOCON 2018), February 1-3, 2018; organized by The Department of Zoology, University of Calcutta in collaboration with The Zoological Society, Kolkata.

7. Madhushrita Das, Ankhi Haldar, Tanmoy Kumar Dey, Roshni Bhattacharya, Pubali Dhar and **Jana Chakrabarti**. *In vitro Study of Antioxidant and Anti-hypertensive Activities of Bioactive Peptides from the Freshwater Mussel Lamellidens marginalis* in the 1<sup>st</sup> International Conference on Biotechnology and Biological Sciences (Biospectrum 2017), August 25-26, 2017; organized by The University of Engineering & Management, Kolkata in association with West Bengal Biodiversity Board and Department of Biotechnology, Government of West Bengal.

8. Madhushrita Das and **Jana Chakrabarti**. *Potential of Fish Protein Hydrolysate as Nutraceuticals: an Overview* in the International Conference on Aquatic Resources & Sustainable Management, February 17-19, 2016; organized by Central Calcutta Science and Culture Organization for Youth in association with Ministry of Agriculture, Earth Sciences, Government of India & Department of Fisheries, Science and Technology, Biotechnology, Government of West Bengal.

9. **Jana Chakrabarti**. *Exploring the Secretory Profile of Leptin in Women with Polycystic Ovary Syndrome* in the International Seminar on Exploring the Modern Approach in Biological Science: From Genome to Organism, November 25-27, 2015; organized by the Department of Zoology, Sidho-Kanho-Birsha University, Purulia, West Bengal in association with SEBA, Kolkata.

10. **Jana Chakrabarti**, Madhushrita Das, Ankhi Haldar, Roshni Chatterjee, Tanmoy Dey, Pubali Dhar. *Evaluation of Functional Properties of Protein Hydrolysate from the Fresh Water Mussel Lamellidens marginalis for Nutraceutical Therapy* in the XIII International Conference on Probiotics and Functional Foods (ICPFF 2015), March 9-10, 2015 organized by The World Academy of Science, Engineering and Technology (WASET) in Miami, Florida, USA.

11. Ankhi Haldar, Madhushrita Das, **Jana Chakrabarti**. *Potential of Bioactive Peptides as Nutraceuticals: An Overview* in the 4<sup>th</sup> International Conference on Updating Food Technology: A Challenge Towards Public Health Nutrition (ICUFT-2014), May 7-8, 2014, organized by the International Institute of Food and Nutritional Sciences (IIFANS), New Delhi, sponsored by The Department of Science and Technology (DST), Govt. of India & Indian Council of Medical Research (ICMR), Govt. of India.

12. **Jana Chakrabarti**, Ankhi Haldar. *Exploring the Nutritive Values of Lamellidens marginalis as a Potent Source of Functional Food* in the XXXIV International Conference on Food Science and Nutrition, July 8-9, 2013, organized by the World Academy of Science, Engineering and Technology (WASET) in London, UK.

13. **Jana Chakrabarti**, B. N. Chakravarty and S. N. Kabir. *Insulin resistance differentially modulates leptin response to estrogens in women with polycystic ovary syndrome* in the International Conference on Reproductive Health with Emphasis on Strategies for Family Planning & 22<sup>nd</sup> Annual Meeting of ISSRF, February 19-21, 2012, organized by the division of Reproductive Health & Nutrition, Indian Council of Medical Research in association with the Indian Society for the Study of Reproduction and Fertility.

14. **Jana Chakrabarti**, R. Chatterjee, S. K. Goswami, B. N. Chakravarty and S. N. Kabir. *Dynamic Secretary Profile of Leptin and Its Impact on Pregnancy Outcome in Women Undergoing Controlled Ovarian Hyperstimulation* in the 4<sup>th</sup> World Congress on Mild Approaches in Assisted Reproduction, January 14-16, 2011 organized by the International Society for Mild Approaches in Assisted Reproduction, GD Institute for Fertility Research in association with IIT, Kharagpur.

15. **Jana Chakrabarti**, R. Chatterjee, S. K. Goswami, B. N. Chakravarty and S. N. Kabir. *Serum Leptin Levels and Polycystic Ovarian Disease: An Overview*; at the 16<sup>th</sup> State Science and Technology Congress, February 28-March 1, 2009, organized by The Department of Science and Technology, West Bengal and Burdwan University in association with West Bengal Bignyan Mancha.

16. **Jana Chakrabarti**, Sourendra Kanta Goswami, Baidyanath Chakravarty and Syed N. Kabir. *PCO women with and without insulin resistance show differential leptin response to ovarian suppression and stimulation during controlled ovarian hyperstimulation* in the Conference on Recent Advances and Challenges in Reproductive Health Research and 17<sup>th</sup> Annual General Meeting of ISSRF, February 19-21, 2007 organized by the Indian Council of Medical Research (ICMR), New Delhi in association with the Indian Society for Study in Reproduction & Fertility.

17. **Jana Chakrabarti**, R. Chatterjee, S.K. Goswami, B.N. Chakravarty and Syed N. Kabir. *Interactive relationship between leptin, body mass index and follicular response to gonadotropins in women with polycystic ovarian disease* in National Symposium on Cross-talk between Zoology and Technology, November 16 & 17, 2006, organized by the Department of Zoology, University of North Bengal, Siliguri, West Bengal.

18. **Jana Chakrabarti** and Pubali Dhar. *Potential Environmental Hazards Evoked by the release of Transgenic animals in Nature: an Ecological Risk Assessment* in National Seminar on Disaster Management, Perspective and Future Approaches, held at Krishnagar Government College, Krishnagar, Nadia, April 16-17, 2004.

19. **Jana Chakrabarti**, Soma Bandyopadhyay, Alok K Pal, Sourendrakanta Goswami and Syed N. Kabir. *Prenatal Exposure to High Galactose in Rat Develops Ovarian Resistance to Gonadotropins Possibly due to Production of Some Anti- gonadotropins* in the 34<sup>th</sup> Annual General Meeting of the Society for the Study of Reproduction held at Ottawa, Ontario, Canada from July 28- August 01, 2001.

20. **J. Chakrabarti**, S. Bandyopadhyay, S. Biswas, S.K. Goswami, B.N. Chakravarty, S. N. Kabir. *Granulosa Cell Potential to Produce Vascular Endothelial Growth Factor (VEGF) Correlates with Oocyte Maturity in Stimulated Cycles* in the International Symposium on Molecular & Clinical Aspects of the Regulation of Ovarian Function: Impact on the Reproductive Health of Women, organized by the All India Institute of Medical Sciences, New Delhi, India. October 6 – 8, 1999.

#### **IX. Course /workshop/ summer training programme:**

1. Completed Graduate level 'Radiation Biology' Course (PMO-582) organized by the Department of Preventive Medicine & Biometrics (PMB), Uniformed Services University of Health Sciences (USUHS), Bethesda, Maryland, USA. (February – May, 2015).
2. Conducted and participated in the workshop on "Techniques in Modern Biology" (Under DBT STAR College Programme) in the Department of Biotechnology, Erstwhile Presidency College, Kolkata, West Bengal, India. (June 25-28, 2010).

3. Completed summer training programme in the Reproductive Biology Lab, Indian Institute of Chemical Biology (IICB), Jadavpur, Kolkata, West Bengal, India. (June – July, 1997).

**Awards and Fellowships:**

- National Scholarship in B.Sc. (Hons.) Examination, 1993
- State Level Eligibility Test (SLET), 1998
- DST Senior Research Fellowship, 1998-2001
- Raman Post-Doctoral Research Fellowship for Indian Scholars in USA (2014-2015), funded by the University Grants Commission (UGC)

**Memberships:**

1. Life Member of Indian Science Congress Association
2. Life Member of Zoological Society, Kolkata
3. Life Member of the Indian Society for the Study of Reproduction and Fertility