DR. SUDIPTA MAITRA

PROFESSOR
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Expertise

Physiology of Reproduction
Endocrine disruption, Metabolic dysfunction, insulin resistance and lipid accumulation, Molecular Endocrinology, Reproductive Physiology, Innate immune response

Education (post-graduation onwards & Professional Career)

Sl No.	Institution Place	Degree Awarded	Year	Field of Study
1.	Burdwan University	M. Sc	1992	Zoology
2.	Visva-Bharati University, Santiniketan	Ph.D.	2000	Endocrine Regulation of Reproduction

Post-Doctoral Research

1	Cellular Immunology Laboratory, Indian Institute of Chemical Biology (CSIR), Kolkata.	DBT-Post Doctoral Fellow	27.06.2001	17.11.2002
2	Fish Nutrition Laboratory Department of Zoology, Visva-Bharati, Santiniketan.	Research Associate (UGC-SAP)	06.05.2000	26.06.2001

Position and Employment (Starting with the most recent employment)

Sl. No.	**Institution** **Place**	**Position**	**From (Date)**	**To (date)**
1	Department of Zoology, Siksha-Bhavana Visva-Bharati, Santiniketan.	Professor	21.11.2016	Continuing
2	Department of Zoology, Siksha-Bhavana Visva-Bharati, Santiniketan.	Associate Professor	21.11.2013	20.11.2016
3	Department of Zoology, Siksha-Bhavana Visva-Bharati, Santiniketan.	Assistant Professor	06.11.2004	20.11.2013

Recognitions

1. Associate Editor: Comparative Immunology, Frontiers in Immunology
2. Review Editor: Frontiers in Endocrinology (Experimental Endocrinology)

Honors/Awards

1. Department of Biotechnology- Post-Doctoral Fellowship, 2001
2. Research Associate (UGC-SAP Programme) 2000

Professional membership

Life Member - Indian Society for Comparative Endocrinology

Life Member – Indian Society for the Study of Reproduction and Fertility
Life Member – Zoological Association of Burdwan

Membership in Committees

23.9.2022 – till date (8.2.2024): Director, Internal Quality Assurance Cell (IQAC), Visva-Bharati
2020: Environmental Consciousness and Sustainability (Key point 7, SSR2), NAAC, Visva-Bharati - Member
2019 - ISCE EXECUTIVE COUNCIL (2019-Continuing) - General Secretary

Workshop/Seminar conducted

2015: Convener, National Symposium on Comparative Endocrinology and Reproductive Biology (CERB'2015)

Professional Experience and Training

Name of the Course/ Programme/Training/ Summer or Winter School	Place & Institute	Duration (Dates)	Sponsoring Agency (UGC/ICAR/ICHR/ICSSR/ Academies/Universities etc)
1. UGC sponsored 59th Orientation Course	UGC-Academic Staff College, The University of Burdwan, Burdwan	28 days (19.8.2006-15.09.2006)	UGC
2. UGC sponsored 3rd Refresher Course in Life Science	UGC-Academic Staff College, The University of Burdwan, Burdwan	21 days (6.8.2011-26.8.2011)	UGC
3. International Workshop on Applications of Flow cytometry and Imaging in Cell Biology and Nano-Biotechnology	Centre for Research in Nanoscience and Nanotechnology, University of Calcutta	7 days (Aug. 11- 18, 2012)	University of Calcutta & BD Biosciences
4. Course on Real Time PCR	Labindia Research and Development laboratory, Gurgaon, India	September 9th-11th, 2008	Applied Biosystems and LABINDIA
5.. National Workshop on Interaction of Ionizing Radiation with biological systems	UGC-DAE consortium for scientific research, Kolkata centre & Department of Zoology, Visva-Bharati, Santiniketan	March 29th-30th, 2010	UGC-DAE consortium for scientific research, Kolkata center & Department of Zoology, Visva-Bharati, Santiniketan

Fields of Specialization under the Subject/Discipline

Areas of research:
(a) Molecular and Cellular Endocrinology in fish (b) Reproductive Physiology
(c) Endocrine regulation of macrophage function/inflammatory response

Teaching:
Methods in Biology, Fish Reproductive Physiology, Mechanism of hormone action in vertebrates, Developmental Biology and Cellular Immunology

Skills

- Protein Electrophoresis, Western Blot, ELISA, Radio-Immuno Assay
- Isolation of DNA, RNA, agarose gel electrophoresis, PCR, RT-PCR & qRT-PCR
- Animal cell culture, Isolation, biochemical & immunological characterization of proteins. Raising polyclonal antisera, Chromatography, Biochemical assays. Immuno-cytochemistry, Confocal microscopy
- Maintenance and breeding of Zebrafish, embryo culture.
- Endocrine and metabolic disruption

Research Projects

1. “Characterization of molecular candidates regulating ovulatory response vis-à-vis oocyte bioenergetics in zebrafish: susceptibility to environmental contaminants”
Funded by: Science and Engineering Research Board, Government of India
Role: Principal Investigator
Year: 2024, Amount: Rs. 50.3575 Lakhs

2. “Role of certain herbal products in the healing of cutaneous wound in an Indian major carp”
Funded by: Science and Engineering Research Board, Government of India
Role: Mentor
Year: 2022, Amount: Rs. 18.30 Lakhs

3. "Assessment of endocrine disruption in fish reproduction"
Funded by: Department of Biotechnology, Government of India
Role: Project Coordinator & Principal Investigator
Year: 2019, Amount: Rs. 288.78883 Lakhs

4. “Elucidating the mechanism and assessing amelioration potential of *Ocimum* and *Lucas* in stress-induced impaired energy homeostasis on growth and reproduction in Zebrafish”
Funded by: National Agricultural Science Fund (NASF), Indian Council of Agricultural Research (ICAR), New Delhi
Role: Principal Investigator (PI)
Year: 2017, Amount: Rs. 182.51050 Lakhs

5. Attempt to conserve endangered catfishes of Arunachal hill streams by manipulating germ cell maturation
Funded by: Department of Biotechnology, Government of India
Role: Principal Investigator (PI)
Year: 2011, Amount: Rs. 68.11 Lakhs

6. Regulation of gonadotropin dependent oocytes maturational competence in catfish, *Clarias batrachus*.
Funded by: University Grants Commission, New Delhi
Role: Principal Investigator (PI)
Year: 2011, Amount: Rs. 6.91 Lakhs

7. Molecular mechanism involved in the regulation of perch (*Anabas testudineus*) oocyte maturation
Funded by: SERB, Department of Science & Technology (DST), Government of India
Role: Principal Investigator (PI)
Year: 2007, Amount: Rs. 17.64210 Lakhs

Research Collaborations

1. Dr. Jitendra Kumar Sundaray, Head of Division, Division of Fish Genetics & Biotechnology, ICAR-Central Institute of Freshwater Aquaculture, Kausalyaganga, Bhubaneswar - 751002, Odisha and
2. Dr. B.K Das, Director ICAR - Central Inland Fisheries Research Institute, Monirampur (Post), Barrackpore - 700120, West Bengal

   Under DBT-sponsored Network/Collaborative research Project entitled "Assessment of endocrine disruption in fish reproduction (F. No. No.BT/PR28560/AAQ/3/919/2018), Coordinator & PI: Dr. Sudipta Maitra, Visva-Bharati Co-PI: Prof. Ansuman Chattopadhyay; Co-PI: Dr. Sutapa Mukherjee, Department of Zoology, Visva-Bharati (lead centre)
3. National Agricultural Science Fund (NASF, ICAR) sponsored collaborative Research Project (Ref. No. NASF/ABA-6018/2016-17), PI: Dr. Sudipta Maitra, Co-PI: Dr. Surjya Saikia, Visva-Bharati CCPI: Dr. Satya Sundar Bhattacharya, Department of Environmental Science, Tezpur University, Sonitpur – 784 028, Assam. Email: evssatya@gmail.com, Ph.: +913712-275610
4. Prof. Sankar Ch. Moi, Department of Chemistry, National Institute of Technology Durgapur, M.G. Avenue, Durgapur-713209, West Bengal, India (Work area:Evaluation of synthesized compounds against cancer cell proliferation).
5. Dr. Prithidipa Sahoo, Department of Chemistry, Visva-Bharati (Area of work: evelopment of novel fluoroscent probes (sensors) to detect environmental pollutants in water bodies and their impact on fish models).

Research Guidance/Supervision

Ph. D. Degree awarded – 12, Number of research scholars working for Ph.D. at present –5

Doctoral Theses Guided

1. "Interplay between steroids and growth factors in zebrafish ovary: potential influence of endocrine-disrupting chemicals on reproductive fitness" by Dr. Subhasri Biswas, awarded Ph.D. degree from Visva-Bharati on 25/09/2023.

2. "Impact of bisphenol-A on metabolism and reproduction of *Labeo bata* (Hamilton, 1822)" by Dr. Urmi Mukherjee, awarded Ph.D. degree from Visva-Bharati in 2022.

3. "Nitric oxide regulation of ovarian function in relation to plasma sex steroid levels in freshwater teleosts" Visva-Bharati University, by Dr. Poulomi Nath, awarded Ph.D. degree from Visva-Bharati in 2019.

4. "Endocrine modulation of inflammatory response in murine macrophages through insulin action". Visva-Bharati University, by Dr. Soumojit Pal, awarded Ph.D. degree from Visva-Bharati in 2018.

5. "Comparative study on dynamics of ovarian follicular growth and its regulation in catfish, *Olyra longicaudata* and zebrafish, *Danio rerio*". by Dr. Pritha Ghosh, awarded Ph.D. degree from Visva-Bharati in Visva-Bharati University in 2017.

6. "Characterization and endocrine regulation of meiotic maturational competence in relation to ovarian growth in catfish *Clarias batrachus*, (Linn.)". by Dr. Sudip Hajra awarded Ph.D. degree from Visva-Bharati in Visva Bharati University in 2016.

7. "Molecular mechanism of insulin-induced oocyte maturation in zebrafish *Danio rerio* (Hamilton, 1822)" by Dr. Debabrata Das, awarded Ph.D. degree from Visva Bharati University in 2015.

8. "Role of Fetuin A in lipid induced insulin resistance" by Dr. Durba Pal, awarded Ph.D. degree from Visva Bharati University in 2013.

9. "Functional properties of C-reactive protein purified from Achatina fulica (Bowdich)" by Dr. Sandip Mukherjee awarded Ph.D. degree from Visva Bharati University in, 2012.

10. "Regulation of maturational events in freshwater perch (*Anabas testudineus*) oocytes" by Dr. Pragya Paramita Khan, awarded Ph.D. degree from Visva Bharati University in 2011.

11. "Molecular basis of insulin resistance: Determination of possible drug target." By Dr. Suman Dasgupta, awarded Ph.D. degree from Visva Bharati University in 2011.

12. "Endosymbiotic bacteria in filarial worms: Potential targets for control of filariasis" by Dr. Sutapa Datta, awarded Ph.D. degree from Visva Bharati University in 2011.

Research publications

A. Published papers in journals (in chronological order)

1. Das, S., Mukherjee, U., Biswas, S., Banerjee, S., Karmakar, S., & **Maitra, S**. (**2024**). Unravelling bisphenol A-induced hepatotoxicity: Insights into oxidative stress, inflammation, and energy dysregulation**.** ***Environmental Pollution***, *362*, 124922.
2. Ghosh, S., Biswas, S., Mukherjee, U., Karmakar, S., & **Maitra, S.** (**2024**). Participation of follicular superoxides, inflammatory modulators, and endocrine factors in zebrafish (Danio rerio) ovulation: Cross-talk between PKA and MAPK signaling in Pgr regulation of ovulatory markers. ***Molecular and Cellular Endocrinology***, *585*, 112180.
3. Mukherjee, U., & **Maitra, S**. (**2024**). Impact of Metabolic disrupting chemicals on redox homeostasis, energy sensors, receptor modulation, and hormone metabolism: A comparative account in Teleost and mammalian model organisms. ***Aquaculture and Fisheries***, *9*(3), 455-485.
4. Mukherjee, U., Das, S., Ghosh, S., & **Maitra, S.** (**2024**). Reproductive toxicity of bisphenol A, at environmentally relevant concentrations, on ovarian redox balance, maturational response, and intra-oocyte signalling events in *Labeo bata*. ***Science of The Total Environment***, 906, 167415.
5. Biswas, S., Ghosh, S & **Maitra, S.** (**2023**). Role of insulin-like growth factor 1 (IGF1) in the regulation of mitochondrial bioenergetics in zebrafish oocytes: lessons from *in vivo* and *in vitro* investigations. ***Frontiers in Cell and Developmental Biology***, 11, 1202693.

6. Ghosh, S., Biswas, S., & **Maitra, S. (2022)**. Molecular determinants regulating the release of the egg during ovulation: Perspectives in piscine models. ***Aquaculture and Fisheries***, *7*(5), 583-594.

7. Tarai, S. K., Pan, A., Das, S., Bhaduri, R., Mandal, S., **Maitra, S**., & Moi, S. C. (**2022**). Anticancer property and normal cell toxicity profile of pyrrolidine-based platinum (II) complexes: Their DNA, BSA interaction, and molecular docking. **Applied Organometallic Chemistry**, 36(11), e6859.

8. Mukherjee, U., Samanta, A., Biswas, S., Ghosh, S., Das, S., Banerjee, S., & **Maitra, S. (2022)**. Chronic exposure to nonylphenol induces oxidative stress and liver damage in male zebrafish (Danio rerio): mechanistic insight into cellular energy sensors, lipid accumulation and immune modulation. ***Chemico-Biological Interactions***, *351*, 109762.

9. Kundu, S., Biswas, S., Ghosh, S., Karmakar, I., Brahmachari, G., **Maitra, S.**, & Sahoo, P. **(2022)**. A selective luminescent probe to monitor cellular ATP: Potential application for in vivo imaging in zebrafish embryo. ***Journal of Photochemistry and Photobiology A: Chemistry***, *428*, 113895.

10. Biswas, S., Ghosh, S., Das, S., & **Maitra, S. (2021)**. Female reproduction: at the crossroads of endocrine disruptors and epigenetics. In ***Proceedings of the Zoological Society*** (pp. 1-14). Springer India.

11. Biswas, S., & **Maitra, S. (2021)**. Altered redox homeostasis in steroid-depleted follicles attenuates hCG regulation of follicular events: Cross-talk between endocrine and IGF axis in maturing oocytes. ***Free Radical Biology and Medicine***, *172*, 675-687.

12. Chowdhury, S., Chatterjee, S., Bhattacharya, **S., Maitra**, S., Saikia, S. (**2021**). Acidic ambiance induced post-oxidative stress affects AMPK-PGC1α-SIRT1 axis in the skeletal muscles of zebrafish Danio rerio Hamilton, 1822, In ***Acta Biologica Szegediensis***, 64(2):191-198.

13. Biswas, S., Ghosh, S., Samanta, A., Das, S., Mukherjee, U., & **Maitra, S**. (**2020**). Bisphenol A impairs reproductive fitness in zebrafish ovary: Potential involvement of oxidative/nitrosative stress, inflammatory and apoptotic mediators. ***Environmental Pollution***, *267*, 115692. https://pubmed.ncbi.nlm.nih.gov/33254711/

14. Mukherjee, U., Samanta, A., Biswas, S., … & **Maitra, S.** (**2020**). Bisphenol A-induced oxidative stress, hepatotoxicity and altered estrogen receptor expression in *Labeo bata*: impact on metabolic homeostasis and inflammatory response. ***Ecotoxicology and Environmental Safety***, *202*, 110944. https://pubmed.ncbi.nlm.nih.gov/32800225/

15. Saha, S., Das, S., Das, S., Samanta, A., **Maitra, S.**, & Sahoo, P. (**2020**). Prompt detection of endogenous hypochlorite (ClO−) in murine macrophages and zebrafish embryos facilitated by a distinctive chemodosimetric mode. ***Organic & Biomolecular Chemistry***, *18*(34), 6716-6723. https://pubmed.ncbi.nlm.nih.gov/32820796/

16. Biswas, S., Mukherjee U., & Maitra, S. (**2020**). Endocrine disruption and female reproductive health: Implications on cross-talk between endocrine and autocrine/paracrine axes in the ovary. ***Journal of Reproductive Health and Medicine, 1;2.***

17. Nath, P., Mukherjee, U., Biswas, S., Pal, S., Das, S., Ghosh, S., ... & **Maitra, S.** (**2019**). Expression of nitric oxide synthase (NOS) in Anabas testudineus ovary and participation of nitric oxide-cyclic GMP cascade in maintenance of meiotic arrest. ***Molecular and Cellular Endocrinology***, *496*, 110544. https://pubmed.ncbi.nlm.nih.gov/31419465/

18. Pal, S., Nath, P., Biswas, S., Mukherjee, U., & **Maitra, S.** (**2019**). Nonylphenol attenuates SOCS3 expression and M1 polarization in lipopolysaccharide-treated rat splenic macrophages. ***Ecotoxicology and Environmental Safety***, *174*, 574-583. https://pubmed.ncbi.nlm.nih.gov/30870658/

19. Nath, P., & **Maitra, S.** (**2019**). Physiological relevance of nitric oxide in ovarian functions: an overview. ***General and Comparative Endocrinology***, *279*, 35-44. https://pubmed.ncbi.nlm.nih.gov/30244056/

20. Mahata, S., Mukherjee, S., Tarai, S.K., Pan, A., Mitra, I., Pal, S., **Maitra, S**. and Moi, S.C. (**2019**). Synthesis and characterization of Pt (ii)-based potent anticancer agents with minimum normal cell toxicity: their bio-activity and DNA-binding properties. ***New Journal of Chemistry***, *43*(47), pp.18767-18779. http://dx.doi.org/10.1039/c9nj03108a

21. Das, S., Mukherjee, U., Pal, S., **Maitra, S**., & Sahoo, P. (**2019**). Selective sensing of Al 3+ ions by nitrophenyl induced coordination: imaging in zebrafish brain tissue. ***Organic & Biomolecular Chemistry***, *17*(21), 5230-5233. https://pubmed.ncbi.nlm.nih.gov/30990508/

22. Pal, S., Nath, P., Das, D., Hajra, S., & **Maitra, S.** (**2018**). Cross-talk between insulin signalling and LPS responses in mouse macrophages. ***Molecular and cellular Endocrinology***, *476*, 57-69. https://pubmed.ncbi.nlm.nih.gov/29715496/

23. Sarkar, H. S., Ghosh, A., Das, S., Maiti, P. K., **Maitra, S**., Mandal, S., & Sahoo, P. (**2018**). Visualisation of DCP, a nerve agent mimic, in Catfish brain by a simple chemosensor. ***Scientific reports***, *8*(1), 1-7. https://pubmed.ncbi.nlm.nih.gov/29467435/

24. Das, D., Nath, P., Pal, S., Hajra, S., Ghosh, P., & **Maitra, S**. (**2018**). Relative importance of phosphatidylinositol-3 kinase (PI3K)/Akt and mitogen-activated protein kinase (MAPK3/1) signaling during maturational steroid-induced meiotic G2–M1 transition in zebrafish oocytes. ***Zygote***, *26*(1), 62-75. https://pubmed.ncbi.nlm.nih.gov/29229010/

25. Nath, P., Das, D., Pal, S., & **Maitra, S.** (**2018**). Nitric oxide (NO) inhibition of meiotic G2-M1 transition in Anabas testudineus oocytes: Participation of cAMP-dependent protein kinase (PKA) in regulation of intra-oocyte signaling events. ***Molecular and Cellular Endocrinology***, *460*, 162-169. https://pubmed.ncbi.nlm.nih.gov/28743518/

26. Biswas, S., & **Maitra, S**. (**2017**). Let's Talk and Grow Together: A Bidirectional Communication between Granulosa-and Oocyte-Derived Factors in the Ovary. ***Glob. J. Reprod. Med***., *1*(4). http://dx.doi.org/10.19080/GJORM.2017.01.555569

27. Mahapatra, S., Kabita, S., Bhattacharya, D., Sarkar, S., Juin, S. K., **Maitra, S**., & Nath, P. (**2017**). Purification and development of ELISAs for two forms of vitellogenin in Indian walking catfish, Clarias batrachus (L.). ***Fish physiology and Biochemistry***, *43*(2), 477-491. https://pubmed.ncbi.nlm.nih.gov/28247155/

28. Juin, S. K., Sarkar, S., **Maitra, S**., & Nath, P. (**2017**). Effect of fish vitellogenin on the growth of juvenile catfish, Clarias gariepinus (Burchell, 1822). ***Aquaculture Reports***, *7*, 16-26. http://dx.doi.org/10.1016/j.aqrep.2017.05.001

29. Das, D., Khan, P. P., & **Maitra, S.** (**2017; Epub 2016**). Endocrine and paracrine regulation of meiotic cell cycle progression in teleost oocytes: cAMP at the centre of complex intra-oocyte signalling events. ***General and Comparative Endocrinology***, *241*, 33-40. https://pubmed.ncbi.nlm.nih.gov/26773339/

30. Das, D., Nath, P., Pal, S., Hajra, S., Ghosh, P., & **Maitra, S**. (**2016**). Expression of two insulin receptor subtypes, insra and insrb, in zebrafish (Danio rerio) ovary and involvement of insulin action in ovarian function. ***General and Comparative Endocrinology***, *239*, 21-31. https://pubmed.ncbi.nlm.nih.gov/26853486/

31. Das, D., Pal, S., & **Maitra, S.** (**2016**). Releasing prophase arrest in zebrafish oocyte: synergism between maturational steroid and Igf1. ***Reproduction***, *151*(1), 59-72. https://pubmed.ncbi.nlm.nih.gov/26500283/

32. Ghosh, P., Das, D., Juin, S. K., Hajra, S., Kachari, A., Das, D. N., ... & **Maitra, S.** (**2016**). Identification and partial characterization of *Olyra longicaudata* (McClelland, 1842) vitellogenins: Seasonal variation in plasma, relative to estradiol-17β and ovarian growth. ***Aquaculture Reports***, *3*, 120-130. http://dx.doi.org/10.1016/j.aqrep.2016.01.005

33. Hajra, S., Das, D., Ghosh, P., Pal, S., Nath, P., & **Maitra, S.** (**2016**). Regulation of recombinant human insulin-induced maturational events in *Clarias batrachus* (L.) oocytes in vitro. ***Zygote***, *24*(2), 181-194. https://pubmed.ncbi.nlm.nih.gov/25707854/

34. **Maitra, S**., Das, D., Ghosh, P., Hajra, S., Roy, S. S., & Bhattacharya, S. (**2014**). High cAMP attenuation of insulin-stimulated meiotic G2-M1 transition in zebrafish oocytes: interaction between the cAMP-dependent protein kinase (PKA) and the MAPK3/1 pathways. ***Molecular and Cellular Endocrinology***, *393*(1-2), 109-119. https://pubmed.ncbi.nlm.nih.gov/24956082/

35. Kachari, A., Gogoi, B., Dutta, R., Aran, K., Ghosh, P., **Maitra, S.**, ... & Das, D. N. (2014). Habitat preference of an endangered hill stream catfish Olyra longicaudata (McClelland) From Arunachal Pradesh, India. ***International Journal of Fisheries and Aquatic Studies***, *1*, 86-93.

36. Das D., Khan PP, **Maitra S. (2013)** Participation of PI3-kinase/Akt signaling in insulin stimulation of p34cdc2 activation in zebrafish oocyte: Phosphodiesterase 3 as a potential downstream target **Molecular and Cellular Endocrinology 374:46-55.** https://pubmed.ncbi.nlm.nih.gov/23623869/

37. Khan PP., **Maitra S (2013)** Participation of cAMP-dependent protein kinase and MAP kinase pathways during *Anabas testudineus* oocyte maturation **General and Comparative Endocrinology 181:88−97.** https://pubmed.ncbi.nlm.nih.gov/23174698/

38. Mukherjee S., Chatterjee S., Sarkar S., Agarwal S., Kundu R., **Maitra S.** Bhattacharya S. **(2013)** Mollusc C-reactive protein crosses species barrier and reverses hepatotoxicity of lead in rodent models **Indian Journal of Experimental Biology 51:623-634**. https://pubmed.ncbi.nlm.nih.gov/24228386/

39. Das D. and **Maitra S**. **(2012)** Multiple signaling pathways through estrogen receptor α and β. **World Journal of Science & Technology 2(7):93−102.**

40. Pal D, Dasgupta S, Kundu R, **Maitra S**, Das G, Mukhopadhyay S, Ray S, Majumdar SS, Bhattacharya S. **(2012)** Fetuin-A acts as an endogenous ligand of TLR4 to promote lipid-induced insulin resistance. **Nature Medicine 18, 1279–1285.** https://pubmed.ncbi.nlm.nih.gov/22842477/

41. Suman Dasgupta , Sushmita Bhattacharya , **Sudipta Maitra** , Durba Pal , Subeer S. Majumdar, Asis Datta, Samir Bhattacharya (**2011**) Mechanism of lipid induced insulin resistance: Activated PKCε is a key regulator **Biochim Biophys Acta - Molecular Basis of Disease**. 1812(4):495-506. https://pubmed.ncbi.nlm.nih.gov/21236337/

42. Prajna Gayen, Ananya Nayak, Prasanta Saini, Niladri Mukherjee, **Sudipta Maitra**, Prasanta Sarkar, Santi P Sinha Babu **(2013).** A double-blind controlled field trial of doxycycline and albendazole in combination for the treatment of bancroftian filariasis in India. **Acta tropica** 125 (2), 150-156. https://pubmed.ncbi.nlm.nih.gov/23123345/

43. Nayak A., Gayen P., Saini B., **Maitra S**, Sinha Babu, S (**2011**) Albendazole induces apoptosis in adults and microfilariae of *Setaria cervi* **Experimental Parasitology** 128(3):236–242. https://pubmed.ncbi.nlm.nih.gov/21439277/

44. Gayen P, **Maitra S**, Datta S, Sinha Babu SP (**2010**) Evidence for *Wolbachia* symbiosis in microfilariae of *Wuchereria bancrofti* from West Bengal, India. ***J. Biosci.*** **35(1), March 2010, 73–77.** https://pubmed.ncbi.nlm.nih.gov/20413911/

45. Datta S, **Maitra S**, Gayen P, Sinha Babu SP (**2009**) Improved efficacy of tetracycline by acaciasides on *Dirofilaria immitis*. ***Parasitology Research***. 105:697–702. https://pubmed.ncbi.nlm.nih.gov/19430817/

46. Anamika Priyadarshini,, Dipanjan Basu , A.K. Navneet , Anirban Bhattacharya , Shelley Bhattacharya , **Sudipta Maitra** , Samir Bhattacharya (**2009**). Activation of both Mos and Cdc25 is required for G2-M transition in perch oocyte. **Molecular Reproduction and Development 76(3): 289-300.** https://pubmed.ncbi.nlm.nih.gov/18671273/

47. Sutapa Datta, **Sudipta Maitra**, Prajna Gayen and S.P. Sinha Babu **(2007)** Absence of symbiotic *Wolbachia* endobacteria in *Setaria cervi* from Birbhum, West Bengal, India. ***Current Science*** **93(1):22-23.** https://www.jstor.org/stable/24099421

48. **Sudipta Maitra**, Raju Sahu, Nirupama Trehan, S.K. Garg and Panchanan Nath **(2007)** Circannual variation in plasma vitellogenin and gonadotropin II levels in relation to annual ovarian cycle in female mrigal, *Cirrhinus mrigala*. **Aquaculture, 265: 370-384.** http://dx.doi.org/10.1016/j.aquaculture.2007.02.002

49. **S. Maitra**, S. Ramachandran and A.K. Ray **(2007)** In vitro assay of plant protease inhibitors from four different sources on digestive proteases of rohu, *Labeo rohita* (Hamilton) fingerlings. **Aquaculture Research, 38:156-165.** http://dx.doi.org/10.1111/j.1365-2109.2006.01640.x

50. Monidipa Ghosh, Labanya Mandal, **Sudipta Maitra**, Srabanti Rakshit, Kausik Paul, Jayashree Bagchi, Dipyaman Ganguly, Chiranjib Pal and Santu Bandyopadhyay **(2006)** *Leishmania donovani* infection of human myeloid dendritic cells leads to Th1response in CD4+ T cells of normal donors and Kala-azar patients. **Journal of Infectious Diseases, 194:294-301.** https://pubmed.ncbi.nlm.nih.gov/16826476/

51. **S.Maitra** and A.K. Ray **(2003)** Inhibition of Digestive Enzymes in Rohu, *Labeo rohita* (Hamilton) Fingerlings by Tannin: an in vitro study. **Aquaculture Research, 34:93-95.** http://dx.doi.org/10.1046/j.1365-2109.2003.00792.x

52. M. Ghosh, C. Pal, M. Ray, **Sudipta Maitra**, L. Mandal and Santu Bandyopadhyay **(2003)** Dendritic Cell-Based Immunotherapy Combined with Antimony-Based Chemotherapy Cures Established Murine Leishmaniasis. **Journal of Immunology, 170:5625-5629.** https://pubmed.ncbi.nlm.nih.gov/12759442/

53. S.V. Kumar, **Sudipta Maitra** and Shelley Bhattacharya **(2002)** In vitro Binding of Inorganic Mercury to the Plasma Membrane of Rat Platelet Affects Na+-K+-ATPase Activity and Platelet Aggregation. **Biometals, 15:51-57.** https://pubmed.ncbi.nlm.nih.gov/11860022/

54. P. Nath and **S. Maitra (2001)** Role of two plasma vitellogenins from Indian Major Carp (*Cirrhinus mrigala*) in catfish (*Clarias batrachus*) vitellogenesis. **General and Comparative Endocrinology, 124:30-44.** https://pubmed.ncbi.nlm.nih.gov/11703069/

Book authored

Sudipta Maitra and Debabrata Das (**2013**)
"Estrogen Receptors Differential regulation of downstream signaling"
LAP LAMBERT Academic Publishing, ISBN: 978-3-659-32756-8,
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Book chapters

1. Biswas S., Ghosh S., Mukherjee U., Samanta A., Das S. and **Maitra S.** (**2021**) Hormonally Active Agents: A Menace for Oogenesis and Fertility in Teleosts. In: *Recent updates in molecular Endocrinology and Reproductive Physiology of Fish*. (J. Sundaray et al., eds.). # Springer Nature Singapore Pte Ltd. 283-321. ISBN: 978-981-15-8369-8.

2. Acharyya, A., **Maitra, S.** (**2020**) Application of recombinant technology in endocrine research: an update" in Recent Fundamentals of Biodiversity, Biotechnology and Bioinformatics. New Central Book Agency (P) Ltd, In press.

3. Biswas S., Mukherjee U., Ghosh S., Samanta A., Das S. and **Maitra S.** (**2019**) Connecting deregulated inflammation and apoptosis to ovarian follicular dynamics: missing link between endocrine disruption and compromised female fertility: In: ISSRF Newsletter - Translational Research in Reproductive health, Issue 24, (Prof. N.K. Lohiya, Dr. Rupesh Kumar Srivastava, eds). ISSN: 2395-2806.

4. Biswas S., Mukherjee U., **Maitra S.** (**2019**) Endocrine disruption and female reproductive health: Implications on cross-talk between endocrine and autocrine/paracrine axes in the ovary. ISSRF Newsletter - Empowering Reproductive Health Through Basic Research, Volume 23, (Prof Shail K Chaube & Dr. Meenakshi Tiwari, eds). ISSN: 2395-2806.

5. Das D., and **Maitra S.** (**2016**) Insulin Regulation of Ovarian Function: Lessons from Zebrafish (Danio Rerio) Eggs. In: *ISSRF Newsletter - Environmental Impacts on Reproductive Health, Edition: Issue 18,* (Prof. N.K. Lohiya, Dr. P.K. Mishra, Dr. R.S. Sharma, Dr. Sunil Kumar, eds). ISSN: 2395-2806.

6. Nath P.**, Maitra S.**, Sahu R., Mohapatra S., Ghosh J (**2005**) Some Aspects of Teleost Vitellogenesis: Role of Fish Vitellogenin. In: Recent Advances in Hormonal Physiology of Fish and Shellfish Reproduction. (B.N. Singh and A.K. Pandey, eds.) pp. 45-51.

Invited lectures at national/ international conference / seminar

1. **Chaired a session** at the "International Conference on Endocrinology, Metabolism and Reproduction: Exploring New Frontiers 2024 (ICEMR 2024)" organized by Department of Zoology, University of Jammu, during October 22-25, 2024 at Jammu UT, J&K, India.

2. **"Multifactorial Role of Gonadotropin in Zebrafish Oocytes: Insights into Redox Balance, Inflammation, and Mitochondrial Bioenergetics"** – Plenary Lecture in the "International Conference on Endocrinology, Metabolism and Reproduction: Exploring New Frontiers 2024 (ICEMR 2024)" organized by Department of Zoology, University of Jammu, during October 22-25, 2024 at Jammu UT, J&K, India.

3. **Participated** in the "National Seminar on Recent Advances in Animal Science RAASVB-2024" organized by the Department of Zoology, Visva-Bharati, Santiniketan, West Bengal, India during March 7-8, 2024.

4. **Participated** as an important stakeholder and expert in a roundtable meeting to "Discuss on the draft Landscape report of Nonylphenol and its ethoxylates" on February 28, 2024, organized by Toxics Link (www.toxicslink.org), an India-based environmental NGO, in Cypress Hall, India Habitat Centre, New Delhi.

5. **"Molecular insight into gonadotropin-mediated zebrafish ovulatory response: Cross-talk between PKA, MAPK3/1 signalling in nPR regulation of follicular transcripts" –** Invited Lecture in the "International Conference on Molecular Signalling 2024 (ICMS 2024)" organized by School of Life Science, University of Hyderabad during February 01-03, 2024 at Hyderabad, India.

6. **"Potential unintended effects of endocrine disruptors on female reproduction and fertility" –** Invited Lecture in the "6th Regional Science and Technology Congress 2023 (RSTC 2023), Region 4" organized by Sidho-Kanho-Birsha University, Purulia and Department of Science & Technology and Biotechnology Government of West Bengal during December 12-13, 2023.

7. **Chaired a session** and **evaluated oral presentations** in the "6th Regional Science and Technology Congress 2023 (RSTC 2023), Region 4" organized by Sidho-Kanho-Birsha University, Purulia and Department of Science & Technology and Biotechnology Government of West Bengal on 13.12.2023.

8. **"A molecular insight into gonadotropin-mediated zebrafish ovulatory response"** – Plenary Lecture in the "International Symposium on Recent Trends in comparative Endocrinology and Physiology: from brain to behaviour under Indian Society of Comparative Endocrinology (ISCE)" organized by Department of Zoology, S.P. Pune University during October 12-14, 2023 at Pune, India.

9. **Chaired a session** at the International seminar entitled "Regulatory Mechanisms underlying Behavior, Physiology and Development" during March 24-26, 2021 organized by Department of Zoology, University of Delhi.

10. **Chaired a session** at National Seminar on Advancement of Biology in the 21st century held on February 28-29, 2020 in the Department of Zoology, Visva-Bharati University, Santiniketan, West Bengal.

11. **"Insulin modulation of inflammatory response in mouse macrophages under high glucose condition: relative importance of interleukin-10" –** Invited Lecture in the Two days' Workshop cum National Seminar on "Trends in modern biology: Techniques and applications" during March 23-24, 2019 at Department of Zoology, Visva-Bharati University, Santiniketan, West Bengal.

12. **Participated in** 1st Brain storming session on 'Fish reproduction biotechnology: Current Status and Future Prospects' in Visva-Bharati on 6-7th April, 2018.

13. **"Physiological relevance of nitric oxide mediated cyclic nucleotide signalling in intercellular communication within ovarian follicle in teleosts: A myth or the reality?" –** Invited Lecture in the Humboldt Kolleg on Comparative Endocrinology and Physiology organized by Department of Zoology, RTM Nagpur University during January 6-9, 2018 at Nagpur, India.

14. **Functional relevance of nitric oxide (NO)/cGMP signaling in teleost ovary"** – Invited Lecture in the 6th International Conference on Molecular Signaling (ICMS, 2018)" on topic entitled during February 8-10, 2018 at University of Hyderabad, Telangana, India.

15. **Complex dialogue between endocrine and juxtacrine (autocrine/paracrine) factors in teleost ovary"** – Special Lecture in the "International Symposium on Recent Advances in Comparative Endocrinology (ISRACE)" organized by Madras Christian College during 29th Nov -1st Dec, 2017 at Chennai, India.

16. **Antagonism between cAMP-dependent and insulin-mediated signaling pathways in zebrafish (*Danio rerio)* oocytes**. Session 3: Reproduction and Growth & Contraception and strategies for population control. International Symposium on Reproductive Biology and Comparative Endocrinology (ISRBCE 2015). Zoology, Centre of Advanced Study, Banaras Hindu University, Varanasi, India, February 25-27, 2015.

17. **Akt and MAPK3/1 (ERK1/2) activation in zebrafish (*Danio rerio)* oocytes matured *in vivo* and *in vitro*.** Session 2: Molecular and Cellular Endocrinology, and Signal transduction. International Conference on Frontiers in Comparative Endocrinology and Neurobiology 2014 (IC-FCEN 2014). Department of Animal Biology, School of Life Sciences, University of Hyderabad, Hyderabad, India. November 25-28, 2014.

18. **Cyclic AMP-Mediated Inhibition of Insulin-Activated MAPK3/1 phosphorylation and meiotic maturation in zebrafish oocyte.** [December 18-20, 2013]. International Conference on Integrative and Comparative Physiology (SEIB 2013), University of Kerala.

19. **Insulin action beyond metabolism: Inhibition of meiotic G2-M1 transition by adenylate cyclase activation in catfish (*Clarias batrachus*) follicle-enclosed oocytes** [October 21-23, 2013] International Conference on Comparative Endocrinology and Physiology RTM Nagpur University.

20. **Insulin: not just a metabolic hormone** [February 18-21, 2013] International Symposium on Molecular Signaling. Visva-Bharati (A Central University), Santiniketan-731235, India

21. **Crosstalk between cAMP/PKA and MAP kinase signaling in the regulation of meiotic maturation in perch oocytes** [February 16-18, 2012] International Symposium on Comparative Endocrinology and Stress Physiology University of Kerala

22. **Inhibition of PKA upregulates synthesis of Mos and promotes Cdc25 activation during meiotic maturation in perch, *Anabas testudineus* oocyte.** [Sept. 23-25, 2011] National Colloquium on Recent Advances in Molecular and Cellular Endocrinology Department of Zoology, Banaras Hindu University, Varanasi, India.

23. **A Chemical compound purified from plant source may be of use in cancer therapy.** [Nov. 21-23, 2009] INSA Platinum Jubilee International Symposium on 'Research in Molecular Medicine Based on Natural Resources and Traditional Knowledge. National Chemical Laboratory, Pune, India

24. **An approach to identify an alternate regulator for piscine vitellogenesis** [Nov17-19, 2005] National Symposium on Comparative Endocrinology and Reproductive Physiology: Retrospect & Prospect Dept. of Zoology, University of Delhi.

25. **Chaired a session** at The 6th International Conference of Asia and Oceania Society of Comparative Endocrinology (AOSCE) [December10-14, 2007], University of North Bengal, West Bengal, India.

Other Academic Distinctions

1. Dr. Subhasri Biswas, awarded Ph.D. degree in September, 2023, under the supervision of Prof Sudipta Maitra, has joined Oklahoma Medical Research Foundation, USA as a Post-doctoral Fellow in January, 2024.
2. Dr. Sudipta Maitra who has been serving as an Associate Professor in the Department of Zoology, Visva-Bharati since 2004 has been upgraded to the position of Professor on 05.12.2020.
3. Dr. Debabrata Das, awarded Ph.D. degree on 18-07-2016, joined MD Anderson Cancer Center, University of Texas, Houston, US as Research Investigator- Genetics in 2017.
4. Dr. Soumojit Pal, awarded Ph.D. in 2019, joined as International Postdoctoral Associate, University of Pittsburgh, School of Medicine, Department of Medicine, Division of Cardiology on August 1, 2019.
5. Dr. Poulomi Nath, awarded Ph.D. in 2019, joined as post-doctoral fellow in Department of Pharmacology and Chemical Biology, University of Pittsburg, UPMC Hillman Cancer Center in the month of December, 2020.
6. Ms. Sampurna Karmakar received Second Prize in Oral Presentation at the "International Conference on Endocrinology, Metabolism and Reproduction: Exploring New Frontiers 2024 (ICEMR 2024)" organized by Department of Zoology, University of Jammu, during October 22-25, 2024 at Jammu UT, J&K, India. Title of Presentation – Participation of Reactive Oxygen Species, and Inflammatory Mediators in Maturational Steroid-Induced Ovulatory Response in Zebrafish (*Danio rerio*).
7. Mr. Sambuddha Banerjee received the Best Poster Presentation award at the "National Seminar on Recent Advances in Animal Science RAASVB-2024" organized by the Department of Zoology, Visva-Bharati, Santiniketan, West Bengal, India during March 7-8, 2024. Title of presentation – "Acrylamide alters the Brain-Pituitary-Testis axis in adult male zebrafish (Danio rerio) as an effect of disrupted brain homeostasis".
8. Mr. Sambuddha Banerjee received the Third Prize for Oral Presentation at the "International Symposium on Recent Trends in comparative Endocrinology and Physiology: from brain to behaviour under Indian Society of Comparative Endocrinology (ISCE)" organized by Department of Zoology, S.P. Pune University during October 12-14, 2023 at Pune, India. Title of the presentation – "Acrylamide-mediated neurotoxicity disrupts the Brain-Pituitary-Testis axis in adult male zebrafish (*Danio rerio*)".
9. Mr. Sambuddha Banerjee rewarded the Best Poster Presentation in the International seminar entitled "Impact of Climate Change on Aquatic Life and Mitigation Measures for a Sustainable Blue Economy" organized by Department of Zoology, Fatima Mata National College, during March 24-26, 2021 at Kollam, Kerala. Title of presentation "Bisphenol-A Alteration of Neuroendocrine Axis Pertinent to Reproductive Fitness in Adult Female Climbing Perch".
10. Ms. Subhasri Biswas rewarded the Best Poster Presentation in the International conference entitled "Regulatory Mechanisms underlying Behavior, Physiology and Development" organized by Department of Zoology, University of Delhi during March 24-26, 2021. Title of presentation "Protective Effects Of Gonadotropin-Induced Steroid Biosynthesis On Follicular Redox Homeostasis And Igf Axis In Zebrafish Ovary".
11. Mr. Soumyajyoti Ghosh received the Best Poster Presentation with Prof. S.P. Raychaudhuri Memorial Award in the "National Seminar on Advancement of Biology in the 21st century" organized by Department of Zoology, Visva-Bharati University, during 28-29 Feb at Santiniketan, West Bengal, India. Title of presentation "Endocrine disruption and impaired reproductive fitness in zebrafish ovary: participation of inflammatory and apoptotic mediators".
12. Dr. Poulomi Nath received Dr. Shamim Haider Gold Medal Award for best oral presentation in the "International Symposium on Recent Advances in Comparative Endocrinology (ISRACE)". organized by Madras Christian College during 29th Nov -1st Dec, 2017. Title: "Differential expression of NOS isoforms and NO/cGMP regulation of gonadotropin (hCG) action in zebrafish (Danio rerio) ovary".
13. Ms. Subhasri Biswas received Dr. Radhakrishnamurthy Memorial Gold Medal Award for Best Poster Presentation at "International Symposium on Recent Advances in Comparative Endocrinology (ISRACE)" organized by Madras Christian College during 29th Nov -1st Dec, 2017 at Chennai, India. Title: "Aromatase inhibitor DL-Aminoglutethimide prevents igf3 expression in gonadotropin (hCG)-induced zebrafish follicle-enclosed oocytes in vitro potentially through down-regulation of lhcgr expression".