Name: DR. SOMA ADITYA BANDYOPADHYAY

Designation: Associate Professor of Zoology

Email ID (institutional): adityabandyopadhyay.soma@sncwgs.ac.in

Qualification: M.Sc., Ph.D.

- Post Graduate Diploma in Ecology and Environment from Indian Institute of Ecology and Environment, New Delhi, 1998
- Qualified GATE-1997 and Joint CSIR-UGC NET-1998, 1999 in Life Sciences

Teaching Experience: 20 years

- 1. As Part time Lecturer in Bethune College : August 2004-March 2005
- 2. As Honorary Guest Lecturer in Bethune College : April 2005-August 2005
- 3. As Full time Lecturer in SNCW : February 2006-Till date

Academic Interest: Classical Zoology, Endocrinology, Physiology, Comparative Anatomy, Ecology, Wildlife and Conservation

Research Experience: 7 years

Post-Doctoral Research Experience: 1 year

Research Interest: Reproductive endocrinology with special reference to development of suitable animal models for the elucidation of basic regulatory mechanisms pertaining to pathogenesis of different reproductive disorders.

Place of Work: Reproductive Biology Research Division, CSIR-Indian Institute of Chemical Biology, Jadavpur, Kolkata.

Publications:

a) Papers published in Peer-reviewed Indexed journals:

- 1. Soma Aditya Bandyopadhyay and Shramana Saha (2024) Impact of COVID-19 Pandemic on the Mental Health of College Students: A Cross-Sectional Study. *Indian Journal of Health & Wellbeing*, 15(2): 274-277. ISSN: 2229-5356
- Aditya Bandyopadhyay S. (2020) Institutional Ground serves as a safe haven for birds, butterflies and odonates - A case study from Kolkata. *International Journal of Advancement in Life Sciences Research*, 3(4):09-16. ISSN: 2581-4877 https://doi.org/10.31632/ijalsr.20.v03i04.002
- 3. Chatterjee M. and Aditya Bandyopadhyay S. (2020) Assessment of the prevalence of polycystic ovary syndrome among the college students: A case-control study from

Kolkata. *Journal of Mahatma Gandhi Institute of Medical Sciences*, 25(1): 28-32. ISSN: 0971-9903 Cited by 29 DOI: 10.4103/jmgims.jmgims_62_19

- Mandal R. and Aditya (Bandyopadhyay) S. (2017) An observation on the Odonata diversity in and around Sarojini Naidu College campus, Kolkata, West Bengal, India. *International Journal of Entomology Research*, 2(4): 31-34. ISSN: 2455-4758 Cited by 5
- Das, P. and Aditya (Bandyopadhyay) S. (2016) A preliminary assessment of avifaunal diversity in and around Sarojini Naidu College campus, Kolkata, West Bengal, India. *International Journal of Fauna and Biological Studies*, 3(2): 56-61. ISSN: 2347-2677 Cited by 8
- 6. Das P. and Aditya (Bandyopadhyay) S. (2014) Coral reefs in peril : an Appraisal. *Journal of Environment and Sociobiology*, 11(2): 279-284 ISSN: 0973-0834
- Nair, A. V., Mitra, P. and Aditya (Bandyopadhyay), S. (2014) Studies on the diversity and abundance of butterfly (Lepidoptera: Rhopalocera) fauna in and around Sarojini Naidu College campus, Kolkata, West Bengal, India. *Journal of Entomology and Zoology Studies*, 2(4): 129-134. ISSN: 2320-7078 Cited by 89
- 8. Aditya Bandyopadhyay, S. (2014) A preliminary study on the reproductive toxicity of statins in rats. *International Journal of Research in Biological Sciences*, 3(3), 39-47. ISSN: 2319 2844 Cited by 1
- Banerjee, S., Banerjee, S., Saraswat, G., Aditya Bandyopadhyay, S. and Kabir, S.N. (2014) Female reproductive aging is master-planned at the level of ovary. *PLoS ONE*, 9(5), e96210. [I.F. 3.73] Cited by 54 DOI: <u>10.1371/journal.pone.0096210</u>
- Aditya Bandyopadhyay, S. (2014) On the record of a Spot-fin porcupine fish, *Diodon hystrix* (Linnaeus, 1758) from Mandarmani, Bay of Bengal coast of West Bengal, *Proceedings of the Zoological Society*, 67 (2): 175-177. ISSN: 0373-5893 Cited by 4 DOI:<u>10.1007/s12595-013-0087-y</u>
- Banerjee, S., Chakraborty, P., Saha, P., Aditya Bandyopadhyay, S., Banerjee, S. and Kabir, S.N. (2012) Ovotoxic effects of galactose involve attenuation of Folliclestimulating hormone bioactivity and up-regulation of granulosa cell p53 expression. *PLoS ONE*, 7(2), e30709. [I.F. – 4.092] Cited by 46 doi: <u>10.1371/journal.pone.0030709</u>
- Bandyopadhyay, S., Banerjee, S., Pal, A.K., Goswami, S.K., Chakravarty, B.N. and Kabir, S.N. (2004) Primordial germ cell migration in the rat: preliminary evidence for a role of galactosyltransferase. *Biology of Reproduction*, 71(6), 1822-1827. [I.F. – 3.550] Cited by 9 https://doi.org/10.1095/biolreprod.104.028555
- Bandyopadhyay, S., Chakrabarti, J., Banerjee, S., Pal, A. K., Goswami, S.K., Chakravarty, B.N. and Kabir, S.N. (2003) Galactose toxicity in the rat as a model for premature ovarian failure: an experimental approach readdressed. *Human Reproduction*, 18, 2031-38. [I.F. – 3.125] Cited by 102 DOI: <u>10.1093/humrep/deg414</u>
- 14. Bandyopadhyay, S., Chakrabarti, J., Banerjee, S., Pal, A. K., Bhattacharyya, D., Goswami, S.K., Chakravarty, B.N. and Kabir, S.N. (2003) Prenatal exposure to high galactose adversely affects initial gonadal pool of germ cells in rats. *Human Reproduction*, 18, 276-282. [I.F. 3.125] Cited by 58 DOI: <u>10.1093/humrep/deg058</u>

b) Papers published in non-refereed journals:

- 1. Soma Aditya (Bandyopadhyay). (2016) Premature ovarian failure an overview. *The Beats of Natural Sciences* Vol III, Issue. 2, Article no. 3, pg. 1-11. ISSN No. 2348-7615.
- 2. Soma Aditya (Bandyopadhyay). (2012) Polycystic ovary syndrome an enigma. *Bodhi Bignan* Vol II, no. 3, pg. 35-39. ISSN No. 2277-4831.

c) Papers published in Conference Proceedings :

- Aiswarya V. Nair, Pradarsika Mitra and Soma Aditya (Bandyopadhyay) (2014) A study on the butterfly diversity in and around Sarojini Naidu College campus, Dum Dum, Kolkata in Proceedings of the UGC sponsored National Conference on *Biodiversity: Interrelationship between Flora, Fauna and Human,* Mrinalini Datta Mahavidyapith, Birati, September 29 & 30, 2013 Edited by Dr. A. Bandyopadhyay, ISBN:978-81-929410-0-4
- Soma Aditya (Bandyopadhyay) and Gunjan Roy Chowdhury (2014) Plastic Pollution and its consequences on marine biota in Proceedings of the WBDST sponsored seminar-Impact of Pollution: Assessment and Awareness organized by Department of Zoology, Hooghly Womens' College, February 14 & 15, 2014 Edited by Dr. S. Nandi, ISBN: 978-81-921083-8-4
- 3. Priyanka Das and **Soma Aditya Bandyopadhyay** (2014) Coastal shrimp farming-Threats to the environment in Proceedings of the *UGC sponsored National seminar Marine Biodiversity of India Threats and Prospects* organized by Department of Zoology, Raja Peary Mohan College, Uttarpara, Hooghly, September 24 & 25, 2013.
- 4. **Soma Aditya (Bandyopadhyay)** (2012) Prenatal exposure to galactose in rat: A model to investigate Premature Ovarian failure (POF)/Resistant Ovary Syndrome(ROS) in Proceedings of the *RC-Newer Concepts in Life Sciences* held during Nov.19-Dec.08, 2012 Edited by Prof. Sandip Mukhopadhyay and Prof. Asok K. Biswas. Published by UGC-ASC and Dept. of Botany, University of Calcutta, Pg. 120-121.
- Soma Aditya (Bandyopadhyay) (2008) Endangered Birds of India in Proceedings of the Seventy seventh Orientation Program held during Nov 26-Dec 24, 2008. Edited by Prof. Dipa Biswas and Dr. Sriparna Dutta. Published by UGC-Academic Staff College, University of Calcutta, Kolkata. Pg. A32.
- 6. Syed N. Kabir, Soma Bandyopadhyay and Sutapa Banerjee. (2006) Impaired galactosylation of follicle-stimulating hormone a pathway to ovarian resistance in galactosemia in Proceedings of the UGC sponsored State Level Seminar-Recent Advances in Molecular and Integrative Physiology, held on 16-17 Dec, 2005. Edited by Dr. Bitanbindu Bandyopadhyay. Published by Dept. of Physiology, Raja Peary Mohan College, Uttarpara, Hooghly. Pg. 26-31.

d) Chapter in book:

- S. Mukherjee, P. Paul, Soma Aditya Bandyopadhyay, A. Ash, A. Hossain, A. Chakraborty, R. Karmakar, Goutam K. Saha and Gautam Aditya (2025) Urban Bird Assemblages: Characterization Based on Diversity and Ecological Network In *Ecology of Tropical Cities*. Springer Nature Publication (In Press) ISBN978-3-031-70866-4
- Soma Aditya Bandyopadhyay (2024) Exploring the connecting link between Galactosemia and Primary Ovarian Insufficiency–A Comprehensive Review In *Biogenesis Vol.-2*, Edited by Priyankar Sanphui. Nectar Publication, Sonakhali, Midnapore. Pg. 29-46. ISBN : 978-93-94077-36-2
- Soma Aditya (Bandyopadhyay) (2013) Adverse impact of environmental toxicants on fertility In *Progress of Science vis-à-vis Environment*, Edited by D. Choudhury and S.S. Nag Pg. 99-110, ISBN : 978-93-5174-670-6
- Syed N. Kabir and Soma Bandyopadhyay. (2007) Ovarian Dysfunction under Galactose Toxicity In *Hormone Biotechnology* (Commemorative vol. for Prof. Samir Bhattacharya *FNA*) Edited by Saumen Kr. Maitra. Published by Daya Publishing House, Delhi. Pg. 384-398. ISBN : 817035451X

e) Book edited:

1. Contemporary Health Issues and Environmental Impact (2018) Edited by M. Bose, Soma Aditya Bandyopadhyay and S. Poddar. Published by Lincoln University College, Malaysia; ISBN 978-967-10937-9-5

Papers presented in Seminars/Symposia/Conferences

- Metformin improves oocyte quality in Polycystic Ovarian women undergoing controlled Ovarian Hyperstimulation for IVF & ET. Goswami S.K., Chakravarty B.N., Chakrabarti J., Bandyopadhyay S. and Kabir S.N. 11th World Congress on In Vitro Fertilization and Human Reproductive Genetics, Sydney, Australia, 9-14 May, 1999.
- Prenatal exposure to galactose in rat: A model to investigate Resistant Ovary Syndrome (ROS), S. Bandyopadhyay, J. Chakrabarti, S. Biswas, S.K. Goswami, B.N. Chakravarty and S.N. Kabir. International Symposium on Molecular and Clinical Aspects of the Regulation of Ovarian Function : Impact on the Reproductive Health of Women, AIIMS, New Delhi, 6-8 October, 1999. Molecular & Cellular Endocrinology, 164; pp 266 (2000).
- 3. Granulosa cell potential to produce Vascular Endothelial Growth Factor (VEGF) correlates with oocyte maturity in stimulated cycles. J. Chakrabarti, S. Bandyopadhyay, S. Biswas, S. K. Goswami, B. N. Chakravarty and S. N. Kabir. International Symposium on Molecular and Clinical Aspects of the Regulation of Ovarian Function : Impact on the Reproductive Health of Women, AIIMS, New Delhi, 6-8 October, 1999. Molecular & Cellular Endocrinology, 164; pp 265 (2000).

- Prenatal exposure to Nitric Oxide deficient uterine milieu adversely affects development of female reproductive systems in rat. S. Biswas, J. Chakrabarti, S. Bandyopadhyay, A. K. Pal and S. N. Kabir. International Symposium on Molecular and Clinical Aspects of the Regulation of Ovarian Function: Impact on the Reproductive Health of Women, AIIMS, New Delhi, 6-8 October, 1999. Molecular & Cellular Endocrinology, 164; pp 266 (2000).
- Prenatal exposure to high galactose adversely affects initial gonadal pool of germ cells in rats. Kabir, S.N., Chakraborty, J., Bandyopadhyay, S., Pal, A.K., Chakravarty, B.N. and Goswamy, S.K. 16th Annual Meeting of the ESHRE, Bologna, Italy, 25–28 June, 2000.
- Changes in follicular leplin concentrations during induction of superovulation reflect oocyte quality. S. Chowdhury, S.K. Goswami, B.N. Chakravarty, J. Chakrabarti, S. Bandyopadhyay and S.N. Kabir. Third World Congress on Ovulation Induction, Bologna, Italy, 12–14 October, 2000.
- Cancellation due to poor ovarian response in stimulated cycles may be prevented by instantaneous initiation of growth hormone co-treatment. S.K. Goswami, R. Chattopadhyay, S. Ghosh, B.N. Chakravarty, S. Bandyopadhyay and S.N. Kabir. Third World Congress on Ovulation Induction, Bologna, Italy, 12–14 October, 2000.
- Prenatal exposure to galactose adversely affects germ cell migration possibly by way of inhibiting uridine diphosphate galactose 4-epimerase activity in rats.
 S. Bandyopadhyay, J. Chakrabarti, D. Bhattacharyya, B. Chakravarty and S.N.Kabir. 34th Annual Meeting of the Society for the Study of Reproduction, Ottawa, Ontario, Canada, July 28-August 1, 2001.
- Prenatal exposure to high galactose in rat develops ovarian resistance to gonadotropins possibly due to production of some anti-gonadotropins. J. Chakrabarti, S. Bandyopadhyay, A.K.Pal, S.K.Goswami and S.N.Kabir. 34th Annual Meeting of the Society for the Study of Reproduction, Ottawa, Ontario, Canada, July 28- August 1, 2001.
- 10. Prenatal exposure to high galactose produces anti-FSH principle (s) in rat. Goswami, S., Chakravarty, B.N., **Bandyopadhyay, S.**, Banerjee, S. and Kabir, S.N. 18th Annual Meeting of the ESHRE, Vienna, July 1-3, **2002**.
- Evidence for a role of galactosyltransferase in the process of germ cell migration in rats. Goswami, S.K., Banerjee, S., Bandyopadhyay, S., Chakravarty, B.N. and Kabir, S.N. 19th Annual Meeting of the ESHRE, Madrid, Spain, June 29-July 2, 2003.
- 12. Altered isoform(s) of follicle-stimulating hormone may contribute to ovarian resistance to gonadotropins in experimental galactose toxicity. **Soma Bandyopadhyay**, Sutapa Banerjee, Syed N. Kabir. 14th Annual Meeting of the ISSRF, January 23-25, **2004**.
- Galactose toxicity jeopardizes reproductive potential in male rat. Sutapa Banerjee, Soma Bandyopadhyay, Syed N. Kabir. 14th Annual Meeting of the ISSRF, January 23-25, 2004.
- 14. Defective galactosylation of FSH a possible link between galactosaemia and premature ovarian failure. S.N. Kabir, **S. Bandyopadhyay**, S. Banerjee, S.K. Goswami, B. Chakravarty. 20th Annual Meeting of the ESHRE, Berlin, Germany, June 27-30, **2004**.
- 15. Enzymatic inhibition of germ cell migration in the rat: a proposed model for afollicular variety of premature ovarian failure. S. Goswami, S. Banerjee, S. Bandyopadhyay, B. Chakravarty, S.N. Kabir. 20th Annual Meeting of the ESHRE, Berlin, Germany, June 27-30, 2004.

- 16. The size of ovarian follicular quantum impacts the rate of follicular atresia. Soma Aditya (Bandyopadhyay), Sutapa Banerjee, Durba Pal, Sourendrakanta Goswami, Baidyanath Chakravarty and Syed N. Kabir. Conference on Recent Advances and Challenges in Reproductive Health Research and 17th Annual Meeting of the ISSRF, New Delhi, February 19-21, 2007.
- 17. The rate of ovarian follicular atresia is modulated by the size of follicular pool. J. Chakrabarti, S. Banerjee, D. Pal, **S. Aditya Bandyopadhyay**, S.K.Goswami, B.N. Chakravarty and S.N.Kabir. 23rd Annual Meeting of the ESHRE, Lyon, France, July 1-4, **2007**.
- 18. Simvastatin, a HMG-CoA reductase inhibitor, induces premature termination of pregnancy in rats. Padma Das and Soma Aditya (Bandyopadhyay). Symposium on Recent Trends in Reproductive Health Research and 18th Annual Meeting of the ISSRF, Hyderabad, February, 2008.
- 19. The size of ovarian follicular reserve impacts the rate of follicular atresia by modulating the expression of GDF-9 and NOBOX. **Soma Aditya (Bandyopadhyay)**, Sayani Banerjee and Syed N. Kabir. Golden Jubilee International Seminar Researches in Zoology Basic and Applied, The University of Burdwan, March 17-19, **2010**.
- 20. A report of a spiny puffer fish found along the coast of Bay of Bengal at Mandermani, West Bengal, India during the winter season. Priyanka Das, A. V. Nair and Soma Aditya Bandyopadhyay. UGC sponsored State Level Seminar: Recent Trends in Chemistry and Biology: To Ignite Young Minds, Derozio Memorial College, Kolkata, February 10, 2012.
- 21. Galactose toxicity attenuates follicle-stimulating hormone bioactivity that renders the ovary resistant to gonadotrophins and triggers p53-mediated follicular atresia. Soma Aditya Bandyopadhyay. International Conference on Reproductive Health with Emphasis on Strategies for Family Planning & 22nd Annual Meeting of the ISSRF, AIIMS, New Delhi, February 19-21, 2012.
- 22. Adverse impact of environmental toxicants on fertility. **Soma Aditya (Bandyopadhyay)**. UGC sponsored State Level Seminar on Progress of Science vis-à-vis Environment, Sarojini Naidu College for Women, Kolkata, January 11 & 14, **2013**.
- 23. Coral reefs in peril : An appraisal. Priyanka Das and **Soma Aditya (Bandyopadhyay)**. National Seminar on Natural Resources and Heritage Conservation Issues in India organised by SEBA, Paribesh Bhavan, Salt Lake, Kolkata, September 8, 2013.
- 24. Coastal shrimp farming in India Threats to the environment Priyanka Das and Soma Aditya (Bandyopadhyay). UGC sponsored National Seminar on Marine Biodiversity of India: Threats and Prospects, Raja Peary Mohan College, Uttarpara, Hooghly, September 24 & 25, 2013.
- 25. A study on the butterfly diversity in and around Sarojini Naidu College campus, Dum Dum, Kolkata. Aishwarya V. Nair, Pradarsika Mitra, Subhamay Bhattacharya and Soma Aditya (Bandyopadhyay). UGC sponsored National Conference on Biodiversity: Interrelationship between Flora, Fauna and Human, Mrinalini Datta Mahavidyapith, Birati, September 29 & 30, 2013.
- 26. Plastic Pollution and its consequences on marine biota. Gunjan Roy Chowdhury and Soma Aditya (Bandyopadhyay). WBDST sponsored State level Conference on Impact of pollution: Assessment and awareness, Hooghly Women's College, February 14 & 15, 2014.

- 27. Santragachhi wetland: An Avian Hotspot amidst jungle of concretes. Sharanya Chowdhury and **Soma Aditya (Bandyopadhyay)**. National Seminar on Aquaresources: Care and Concerns, IICE, Jadavpur University, Kolkata, February 14, **2015**.
- 28. Experimental galactose toxicity impairs bioactivity of Follicle stimulating hormone and activates granulosa cell apoptosis. Soma Aditya (Bandyopadhyay). International Seminar on Exploring the modern approach in Biological Science: From Genome to Organism Dept. of Zoology, SKBU & SEBA, Purulia, Nov 25-27, 2015.
- 29. Indigenous Ornamental fish for overseas trade: Sustaining Livelihood or Destroying Ecosystem? A Brief Overview, Barnali Manna and **Soma Aditya (Bandyopadhyay)**. International Conference on Aquatic Resources and Sustainable Management CCSCOY, Dept. of Fisheries, WB & CU, Science City, Kolkata, February 17-19, **2016**.
- 30. Reproductive health awareness and risks among adolescent girls of rural India. **Soma Aditya (Bandyopadhyay)**. International Conference on Reproductive Health 26th Annual meeting of the ISSRF 2016 NIOH & ISSRF, Ahmedabad February 18-20, **2016**.
- 31. A case study on butterfly gardening in College campus: prospects for conservation management. Sharanya Chowdhury and Soma Aditya (Bandyopadhyay). UGC sponsored National Seminar on Conservation of Biodiversity and Natural Resources in Sustainable Development, APC College, New Barrackpore, September 6-7, 2016.
- 32. A preliminary study on the diversity of Odonata fauna in and around Sarojini Naidu College campus, Kolkata, West Bengal, India. **Soma Aditya (Bandyopadhyay)**. International Conference on Advances in Biological Techniques, Raja Peary Mohan College, Uttarpara, Hooghly, November 2-4, **2017**.
- 33. A preliminary assessment of prevalence of Polycystic Ovary Syndrome among the students of Sarojini Naidu College for Women, Kolkata Madhumati Chatterjee and Soma Aditya Bandyopadhyay. International Conference on Contemporary Health Issues and Environmental Impact, Sarojini Naidu College for Women, Kolkata, November 30, 2017.
- 34. Observations on the Diversity of Butterfly Fauna in Jayanti, Buxa Tiger Reserve, Alipurduar, West Bengal with emphasis on Mud Puddling Tatini Gupta, Soma Aditya Bandyopadhyay, Nivedita Koley, Mala Bose. International Conference on Sustainable Environment & Healthcare, Jadavpur University, Kolkata, December 21-22, 2019
- 35. Effects of Phytochemicals on the Reproductive Health of Women. Soma Aditya Bandyopadhyay. National Symposium on Human Origin, Health and Diseases: Newer Dimensions, SNU, Kolkata, July 21, 2023.

Examination-related assignments

- 1. Served as Examiner, UG Examination, University of Calcutta
- 2. Served as Examiner, UG Examination, The University of Burdwan
- 3. Served as Paper Setter, UG Examination, Sidho-Kanho-Birsha University, Purulia
- 4. Served as Paper Setter, PG Examination, Netaji Subhas Open University
- 5. Served as Paper Setter, Moderator & Examiner, UG Examination, Ramakrishna Mission Vivekananda Centenary College, Rahara
- 6. Served as Paper Setter, Moderator, Examiner, Scrutineer, Head Examiner, UG Examination, West Bengal State University, Barasat

Delivered Extension lecture as Invited speaker -

- Mrinalini Datta Mahavidyapith, Birati
- Vidyasagar Evening College, Kolkata
- East Calcutta Girls' College, Lake Town

Administrative assignments:

- 1. Coordinator, RUSA 2.0, SNCW
- 2. Member, Internal Quality Assurance Cell, SNCW
- 3. Member, Provident Fund and Income Tax Committee, SNCW
- 4. Member, Student Award Committee, SNCW
- 5. Member, Grievance Redressal Cell, SNCW
- 6. Former Head, Department of Zoology, SNCW 2008-2010, 2014-2016, 2018-2020

Awards and Scholarships

- Principal Panchanan Sinha Memorial Scholarship for standing First in B.Sc. Part-I Honours Exam, 1994 amongst all the science students of Jogamaya Devi College, Kolkata
- National Scholarship in B. Sc. Part-II examination, 1995
- DST Junior Research Fellowship, 1998
- CSIR Senior Research Fellowship, 2001
- CSIR Research Associateship, 2005
- Best Poster presentation in UGC sponsored State Level Seminar organized by Derozio Memorial College in collaboration with WBSU, 2012
- The Blooming Bud Award in National Level e-Poster Competition in Covid-19 Lockdown organized by Durgapur Government College and Durgapur Wildlife Information and Nature Guide Society, 2020
- Best Photograph in Online Photography Competition organized by Sree Chaitanya College, Habra to celebrate World Environment Day, 2020

Professional Memberships

- 1. Life Member with Journal, The Zoological Society, Kolkata.
- 2. Life Member, Indian Society for the Study of Reproduction and Fertility, Jaipur.
- 3. Member, Bombay Natural History Society, Mumbai.
- 4. Life Member, Indian Science Congress Association