

## *Dr. (Mrs.) Luna Samanta*



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### **Academic qualifications:**

- Graduation (Zoology Honours), Utkal University, 1989, First Class (Honours) with Distinction.
- M.Sc. (Zoology, Cytogenetics special paper), Utkal University, 1991, First Class.
- M.Phil. (Zoology, Biochemistry Intensive paper) dissertation entitled, "Linden-induced lipid peroxidation in chick liver", Utkal University, 1993.
- Ph.D. (Zoology) dissertation entitled, "Effect of hexachlorocyclohexane on rat testicular enzymes of active oxygen metabolism as a function of age", Utkal University, 1999.

### **Awards**

- **Commonwealth Academic Staff Fellowship 2012**, Commonwealth Scholarship Commission, United Kingdom at Department of Molecular Endocrinology, Institute of Reproductive and Developmental Biology, Imperial College, London.
- **ISCA Young Scientist Award** in the 90<sup>th</sup> Indian Science Congress, January 3-7, 2003 by Indian Science Congress Association in the section Animal, Veterinary & Fisheries Sciences.
- **K.K. Nair Prize for outstanding Research Publications** for the year 1999, University of Kerala.
- **Young Scientist Award** for the year 1997 by Orissa Vigyan Academy, Department of Science and Technology, Government of Orissa.

### **Scholarship/Fellowships**

1. National Rural Talent Search Scholarship (1981-84)
2. National Scholarship H.S.C. Level (1984-1986)
3. National Merit Scholarship to study M.Sc. (1989-91)
4. Junior Research Fellowship (1992-95), University Grants Commission, India.
5. Senior Research Fellowship (1996-1998), Council of Scientific and Industrial Research, India.

6. Senior Research Fellowship (Extended) (1999-2000), Council of Scientific and Industrial Research, India.
7. Research Associateship (2000-2004), Council of Scientific and Industrial Research, India.

#### **Professional Experience:**

- Research Associateship (1<sup>st</sup> May, 2000- 31<sup>st</sup> March, 2004), Council of Scientific and Industrial Research (CSIR), India at P.G. Department of Zoology, Utkal University, Bhubaneswar-751004.
- Asst-Professor in Biotechnology, Orissa University of Agriculture and Technology, Bhubaneswar, 4<sup>th</sup> October 2004 – 30<sup>th</sup> April, 2005
- Lecturer in Zoology, P.G. Department of Zoology and Collaborative faculty (Additional charge), Department of Biotechnology, Utkal University, Bhubaneswar, 7<sup>th</sup> July, 2005-22<sup>nd</sup> May 2010.
- Associate Professor, Ravenshaw University, Cuttack, 22<sup>nd</sup> May 2010 onwards.

#### **Research Projects**

- “Screening, Isolation and characterization of commercially important antioxidant compounds and marketable agar from seaweeds of Chilika lake”, Science and Technology Department, Govt. of Orissa.
- “Studies on burrowing animals (rats) in and around tailing ponds of Jadugada uranium mines”. BRNS, Department of Atomic Energy, Government of India Bhaba Atomic Research Centre (BARC), Trombay, Mumbai.
- Effect of industrialization of fish from Mahanadi River: A temporal study on Physiological stress response and oxidative stress biomarkers. UGC MRP (Ongoing).

#### **Research guidance**

**Ph.D awarded: 3, Working: 6, M.Phil awarded: 10, Working: 2**

#### **Training Experience (Refresher Courses and Workshops):**

1. “Refresher’s Course in Biotechnology” (DBT Govt. Of India), School of Biotechnology, Madurai Kamaraj University, Madurai, 12<sup>th</sup> May to 7<sup>th</sup> June, 2008).
2. “Workshop on Confocal Lesser Scanning Microscopy” (DBT, Govt of India), Institute of Life Sciences, Bhubaneswar, 14-16<sup>th</sup> January, 2008.
3. “Refresher’s Course in Life Sciences”, UGC, Academic Staff College, Utkal University, 20<sup>th</sup> November to 10<sup>th</sup> December, 2007.
4. “Workshop on Functional genomics & evolutionary biology” (DBT, Govt of India), Institute of Life Sciences, Bhubaneswar, 23-24 November, 2006.
5. “Workshop on “Gamete Micromanipulation, Advanced Andrology, In vitro Oocyte maturation and Gamete Cryopreservation”, organized by Institute of Reproductive Medicine, AH IVF and Infertility Centre, Indian Institute of Chemical Biology, IIT-Kharagpur, Repose Fertility Centre for Infertility and Andrology Research and Department of Biochemistry, University of Calcutta University of Calcutta, Kolkata, 18<sup>th</sup> –25<sup>th</sup> July, 2004.

6. "Workshop on DNA Profiling of Forensic Specimen Using STR Markers (Hyper variable regions of Mitochondrial DNA and Y-Chromosome)", Organised by DNA Typing Unit, Centre for Excellence in Biological Sciences, Central Forensic Science Laboratory, Kolkata, 27<sup>th</sup> March-7<sup>th</sup> April 2000.
7. "Workshop on Basic Molecular Biology in Human Health and Disease" under DBT Contact Programme, Institute of Cytology and Preventive Oncology (ICMR), Division of Molecular Oncology, Maulana Azad Medical College Campus, New Delhi, 16-25<sup>th</sup> February, 2000.
8. "Workshop on Techniques on human cytogenetics", DSA programme in Anthropology, Utkal University, Bhubaneswar, India, 8<sup>th</sup>-12<sup>th</sup> March, 1999.
9. "Workshop on Immunological concepts in tropical parasitic diseases" (DBT contact programme), Regional Medical Research Centre, Bhubaneswar, India, 9<sup>th</sup>-27<sup>th</sup> November, 1992.

## PUBLICATIONS

1. B. Paital and **Luna Samanta** (2012) Comparative study of hepatic mitochondrial oxygen consumption in four vertebrates by using Clark-type electrode. *Acta Biologica Hungarica (Accepted)*. Akadémiai Kiadó, Hungary, **Impact factor 0.793**.
2. Mishra P and **Samanta L** (2012) Oxidative Stress and Heart Failure in Altered Thyroid States. *The Scientific World Journal* Volume 2012, Article ID 741861, 17 pages doi:10.1100/2012/741861. **Impact factor 1.524**.
3. Tripathy A, **Samanta L**, Das S, Parida SK, Marai N, Hazra RK, Mallavdani UV, Kar SK and Mahapatra N (2011) The mosquitocidal activity of methanolic extracts of *Lantana camara* root and *Anacardium occidentale* leaf: Role of Glutathione-S-transferase in insecticide resistance. *J Med. Entomol.* 48(2): 291-295. doi: 10.1603/ME09122. **Impact factor 1.925**.
4. Tripathy A, **Samanta L**, Das S, Parida SK, Marai N, Hazra RK, Mallavdani UV, Kar SK and Mahapatra N (2010) Distribution of sibling species of *Anopheles culicifacies* s.l. and *Anopheles fluviatilis* s.l. and their vectorial capacity in eight different malaria endemic districts of Orissa, India. *Mem Inst Oswaldo Cruz, Rio de Janeiro*, 105: 981-987. **Impact factor 2.1**
5. Chattopadhyay S, Choudhury S, Roy A, Chainy GBN and **Samanta Luna** (2010) T<sub>3</sub> fails to restore mitochondrial thiol redox status altered by experimental hypothyroidism in rat testis. *Gen. Comp. Endocrinol.* 169:39-47. doi.org/10.1016/j.ygcen.2010.07.014. **Impact factor 3.102**
6. **Samanta Luna**, Panigrahi J, Bhanja S and Chainy GBN (2010) Effect of turmeric and its active principle curcumin on T<sub>3</sub> -induced oxidative stress and hyperplasia in rat kidney: A comparison. *Indian J Clin. Biochem* 25:393-397. DOI 10.1007/s12291-010-0046-6.

7. Chattopadhyaya S, Sahoo DK, Roy A, **Samanta Luna** and Chainy GBN (2010) Thiol redox status critically influences mitochondrial response in thyroid hormone-induced hepatic oxidative injury: A temporal analysis. *Cell Biochem. Func.* 28: 126-134. DOI: 10.1002/cbf.1631. **Impact factor 1.651**
8. Pradhan J, Adhikary SP and **Samanta Luna** (2009) Commercial prospective of seaweeds with special reference to antioxidants and sulphated polysaccharides: potential of India. *Indian Hydrobiology.* 12: 176-189.
9. Choudhury S, **Samanta Luna** and Chainy GBN (2003) Inhibition of testicular glutathione S-transferase activity by altered thyroid status. *J Zool Soci India.*
10. **Samanta Luna** and Chainy GBN (2002) Response of testicular antioxidant enzymes to hexachlorocyclohexane is species specific. *Asian J Androl* 4: 191-194. www.asiaandro.com/archive/1008-682X/4/191.htm **Impact factor 1.688**
11. **Samanta Luna** and Chainy GBN (2002) Effect of age on testicular antioxidant defence system. *Indian J. Gerontol.* 16: 69-78.
12. Das K, **Samanta Luna** and Chainy GBN (2000) A modified spectrophotometric assay of superoxide dismutase using nitrite formation by superoxide radicals. *Indian J. Biochem. Biophys.* 37:201-204. **Impact factor 0.824**
13. Sahoo A, **Samanta Luna** and Chainy GBN (2000) Mediation of oxidative stress in HCH-induced neurotoxicity in rat. *Arch. Environ. Contam. Toxicol.* 39:7-12. DOI: 10.1007/s002440010073. **Impact factor 1.93**
14. **Samanta Luna**, Roy A and Chainy GBN (1999) Changes in rat testicular antioxidant defence profile as a function of age and its impairment by hexachlorocyclohexane during critical stages of maturation. *Andrologia* 31: 83-90. DOI: 10.1111/j.1439-0272.1999.tb02850.x. **Impact factor 1.244**
15. **Samanta Luna**, Sahoo A and Chainy GBN (1999) Age-related changes in rat testicular oxidative stress parameters by hexachlorocyclohexane. *Arch. Toxicol.* 73: 96-107. DOI: 10.1007/s002040050593 **Impact factor 4.041**
16. Sahoo A, **Samanta Luna**, Das K, Patra S and Chainy GBN (1998) Hexachlorocyclohexane-induced behavioral and neurochemical changes in rat. *J. Appl. Toxicol.* 19: 13-18. DOI: 10.1002/(SICI) 1099-1263 (199901/02)19:1 <13::AID-JAT531>3.0.CO;2-E. **Impact factor 2.322**
17. Chainy GBN, Samantaray S and **Samanta Luna** (1997) Testosterone-induced changes in testicular antioxidant system. *Andrologia.* 29: 343-349. DOI: 10.1111/j.1439-0272.1997.tb00328.x. **Impact factor 1.244**
18. **Samanta Luna** and Chainy GBN (1997) Comparison of hexachlorocyclohexane-induced oxidative stress in the testis of immature and adult rats. *Comp. Biochem. Physiol.* 118C: 319-327. DOI:10.1016/S0742-8413(97)00132-1. **Impact factor 2.325**
19. **Samanta Luna** and Chainy GBN (1997) Age-related differences of Hexachlorocyclohexane effect on hepatic oxidative stress parameters of chicks. *Ind. J. Exp. Biol.* 35: 457-461. **Impact factor 0.702.**

20. Chainy GBN, **Samanta Luna** and Rout NB (1996) Effect of aluminium on superoxide dismutase, catalase and lipid peroxidation of rat liver. **Res. Commun. Molecul. Pathol. Pharmacol.** 94:217-220.
21. **Samanta Luna** and Chainy GBN (1995) Hexachlorocyclohexane-induced changes in lipid peroxidation, superoxide dismutase and catalase activities and glutathione content in chick liver. **Ind. J. Exp. Biol.** 33: 132-133. **Impact factor 0.702**

#### **Meeting proceedings/Edited Books**

1. **Samanta Luna** and Chainy GBN (2009) Biology of aging. In: Behavioural Concepts in ageing (Sahoo FM ed) Concepts Publishing Company Pvt. Ltd, New Delhi, pp 1-14.
2. **Samanta Luna** and Chainy GBN (2004) Hexachlorocyclohexane-induced oxidative stress: A mechanism for HCH mediated testicular toxicity. In: Current issues in environmental and fish biology (Bhattacharya S and Maitra SK eds.), Daya Publishing House, Delhi, pp 64-90.
3. **Samanta Luna** (1999) Selective bird migration to Bhitarkanika. In: Bhitarkanika: The wonderland of Orissa (Behura B.K. ed.), Nature and Wildlife Conservation Society of Orissa, Bhubaneswar. pp 69-71.
4. **Samanta Luna** and Chainy GBN (1999) Role of Biotechnology in Environmental Management. Industries & Environment Management (Patra, H.K. ed.), P.G. Department of Botany and International Centre for Biotechnology and Policy Studies, Utkal University, Bhubaneswar. pp. 45-49.

#### **Books**

1. Chainy GBN, Choudhury BK and **Samanta Luna** (2006) Environmental studies. Directorate of Distance and Continuing Education, Utkal University, Bhubaneswar.