

## DR. SUDESHNA PAUL

- ❖ **Current Position:** State Aided College Teacher (SACT-1), Department of Food and Nutrition, Behala College.
- ❖ **Teaching experiences:** 4 years (2019-2023 continuing)
- ❖ **Subject (Specilization):** Physiology
- ❖ **Date of birth:** 19.04.1986
- ❖ **Nationality:** Indian
- ❖ **Gender:** Female
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### ACADEMIC QUALIFICATION

- Ph. D. (Sc.) in Physiology, University of Calcutta, 2017.
- M.Sc. in Human Physiology (with special paper- Nutrition & Dietetics), University of Calcutta, 2010.
- B.Sc. in Physiology, University of Calcutta, 2008.

### EXPERTISE

- Animal handling experience.
- Expertise on drug-bio assay *in vitro* and semi *in vitro* systems.
- Extensive use of Clinical biochemistry assays including Antioxidant profile analysis.
- Extremely conversant in handling Light (Compound) microscopy.
- Proficient in Histological, Histopathological, Histochemical techniques.

- Hands on skill in Chromatography, Gel Electrophoresis (SDS-PAGE, Agarose Gel), Enzyme-linked immune sorbent assay (ELISA), Polymerase Chain Reaction (PCR), Reverse Transcription Polymerase Chain Reaction (RT-PCR).
- Work experience with Scanning Electron microscopy (SEM), Atomic Force Microscope (AFM) and Flow cytometry (FACS).

### **TITLE OF PH.D THESIS WORK**

Studies on the protective effect of aqueous bark extract of *Terminalia arjuna* against phenylhydrazine induced oxidative stress in goat red blood cells.

### **PUBLICATIONS BASED ON PH.D THESIS WORK**

1. **Paul S**, Ghosh AK, Ghosh D, Dutta M , Mitra E, Bhowmick D et al, Aqueous Bark extract of *Terminalia arjuna* protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane protein, phospholipid asymmetry and structural morphology: a flow cytometric and biochemical analysis. *J Pharma Res*, 8 (2014) 1790.
2. **Paul S**, Ghosh D, Ghosh AK, Bhowmick D, Bandyopadhyay D, Chattopadhyay A, Aqueous bark extract of *Terminalia arjuna* protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane bound and metabolic enzymes. *Int J Pharm Pharm Sci*, 8 (2016) 69.

### **OTHER PUBLICATIONS**

1. **Paul S**, Naaz S, Ghosh A K, Mishra S, Chattopadhyay A, Bandyopadhyay D, Melatonin chelates iron and binds directly with phenylhydrazine to provide protection against phenylhydrazine induced oxidative damage in red blood cells along with its antioxidant mechanisms: an in vitro study. *Melatonin Res*, 1, (2018) 1.
2. **Paul S**, Ghosh D, Ghosh A K, Mitra E, Dey M, Chattopadhyay A, Bandyopadhyay D, Lead Induces Oxidative Stress In Rat Heart And Liver Tissue Homogenates: An In Vitro Study. *JCTR*, 13, (2013) 3829.

3. Ghosh D, **Paul S**, Naaz S , Bhowmik D, Dutta M et al, Melatonin protects against lead acetate induced oxidative stress-mediated changes in morphology and metabolic status in rat red blood cells: a flow cytometric and biochemical analysis. *J Pharma Res*, 10 (2016) 381.
4. Ghosh D, **Paul S**, Chattopadhyay A, Bandyopadhyay D, Melatonin and aqueous curry leaf extract in combination protects against lead induced oxidative stress mediated injury to rat heart: a new approach. *J Pharma Res*, 9 (2015) 618.
5. Ghosh D, **Paul S**, Firdaus SB, Mishra S, Bandyopadhyay D, Aqueous Extract of *Murraya koenigii* in Combination with Melatonin Provides Better Protection Against Lead Induced Alterations in Blood Corpuscles and Lipid Profile of Male Wistar Rats. *Sci. & Cult.* 80 ( 2014) 347.
6. Ghosal N, Firdaus SB, **Paul S**, Naaz S, Chattopadhyay A et al, Amelioration of gastrotoxic effect of indomethacin by piperine in male Wistar rats: a novel therapeutic approach. *J Pharma Res*, 10 (2016) 240.
7. Mishra S, Naaz S, Ghosh AK, **Paul S**, Ghosal N, Orally administered aqueous bark extract of *Terminalia arjuna* protects against adrenaline- induced myocardial injury in rat heart through antioxidant mechanisms: an *in vivo* and an *in vitro* study. *J Pharma Res*, 10 (2016) 454.
8. Ghosh D, Firdaus SB, Ghosh AK, **Paul S**, Bandyopadhyay D, Protection against lead-induced oxidative stress in liver and kidneys of male Wistar rats using melatonin and aqueous extracts of the leaves of *Murraya koenigii* – A novel combinatorial therapeutic approach. *J Pharma Res*, 8 (2014) 385.
9. Ghosal N, Firdaus SB, Naaz S, **Paul S**, Ghosh AK et al, Gastroprotective effect of Fenugreek 4-hydroxyisoleucine and trigonelline enriched fraction (TF4H (28%))

Sugaheal against indomethacin induced ulcer in male wistar rats. *J Pharma Res*,10 (2016) 351.

10. Mishra S, Dutta M, Mondal SK, Dey M, **Paul S** et al, Aqueous bark extract of *Terminalia arjuna* protects against adrenaline-induced hepatic damage in male albino rats through antioxidant mechanism(s): a dose response study. *J Pharma Res*, 8 (2014) 1264.
11. Firdaus SB, Ghosh D, Chattopadhyay A, Mousumi Dutta M, **Paul S** et al, Protective effect of antioxidant rich aqueous curry leaf (*Murraya koenigii*) extract against gastro-toxic effects of piroxicam in male Wistar rats. *Toxicol Rep*, 1 (2014) 987.
12. Bandyopadhyay D, Ghosh D, Chattopadhyay A, Firdaus Sb, Ghosh AK, **Paul S** et al, Lead induced oxidative stress: a health issue of global concern. *J Pharma Res*, 8 (2014) 1198.

#### **ABSTRACTS/PAPERS PRESENTED IN THE CONFERENCES/ SYMPOSIUMS**

1. **Sudeshna Paul**, Mousumi Dutta, Aindrila Chattopadhyay and Debasish Bandyopadhyay, “Spectrin: an important red blood cell membrane protein”, International Conference on Molecules to systems Physiology:100 Years Journey, Centenary celebration of the Department of Physiology, University of Calcutta. 21<sup>st</sup> – 23<sup>rd</sup> September '2011, PP 59, Pg No. 167.
2. **Sudeshna Paul**, Arnab Kumar Ghosh, Mousumi Dutta, Monalisa Dey, Sanatan Mishra, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Protective effect of aqueous bark extract of *Terminalia arjuna* on phenylhydrazine induced oxidative stress in RBC membrane”, “One day National Seminar on Emerging Trends in Cell and Molecular Biology”, held at Jadavpur University, Kolkata (India), 14<sup>th</sup> December, 2012, P-15, Pg No. 40.
3. **Sudeshna Paul**, Arnab Kumar Ghosh, Mousumi Dutta, Monalisa Dey, Sanatan Mishra, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Effect of aqueous bark extract of *Terminalia arjuna* on phenylhydrazine induced oxidative stress in RBC membrane”,

“100<sup>th</sup> Indian Science Congress, section XI: Medical sciences (including Physiology), held at Calcutta University, Kolkata (India), 3<sup>rd</sup> – 7<sup>th</sup> January 2013, P- 285, Pg No. 409.

4. **Sudeshna Paul**, Debosree Ghosh, Arnab Kumar Ghosh, Monalisa Dey, Aindrila Chattopadhyay and Debasish Bandyopadhyay, “An in vitro study on lead induced oxidative stress in cardiac and hepatic tissue of rat”, 101<sup>st</sup> Indian Science Congress, section XI: Medical sciences (including Physiology), held at Jammu University, Jammu (India), 3<sup>rd</sup> – 7<sup>th</sup> February 2014, P-17, Pg No. 65.
5. **Sudeshna Paul**, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Protective role of aqueous bark extract of *Terminalia arjuna* on phenylhydrazine induced oxidative injury in goat red blood cells”, XXVI<sup>th</sup> Annual National Conference of the Physiological Society of India, PHYSICON 2014, held at Berhampore, Murshidabad, West Bengal (India), 18<sup>th</sup> – 21<sup>st</sup> December 2014, OP-37, Pg No. 104.
6. **Sudeshna Paul**, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Protective effect of aqueous bark extract of *Terminalia arjuna* on phenylhydrazine induced oxidative damage to goat erythrocytes”, 102<sup>nd</sup> Indian Science Congress, section XI: Medical sciences (including Physiology), held at Mumbai University, Mumbai (India), 3<sup>rd</sup> – 7<sup>th</sup> January 2015, Pg No. 132.
7. **Sudeshna Paul**, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Aqueous bark extract of *Terminalia arjuna* protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane protein, phospholipids and structural morphology”, ICMSP 100, Closing Ceremony of Centenary celebration of Department of Physiology, University of Calcutta, 28<sup>th</sup> August, 2015.
8. **Sudeshna Paul**, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Aqueous bark extract of *Terminalia arjuna* protects against phenylhydrazine induced oxidative damage in goat red blood cell membrane bound enzymes and metabolic enzymes”, 103<sup>rd</sup> Indian

Science Congress, section XI: Medical sciences (including Physiology), held at Mysore University, Mysuru (India), 3<sup>rd</sup> – 7<sup>th</sup> January 2016, P-2, Pg No. 134.

9. **Sudeshna Paul**, Debosree Ghosh, Debasish Bandyopadhyay and Aindrila Chattopadhyay, “Studies on the protective effect of aqueous bark extract of Terminalia arjuna against phenylhydrazinoat red blood cellse induced oxidative stress in goat red blood cells”, National Symposium on Oxidative Stress in Health and Disease, organized by Department of Biochemistry and Biophysics, University of Kalyani, 30<sup>th</sup> – 31<sup>st</sup> March, 2017.
10. Participated in the “International Conference on Integrative Physiology: Modern Perspective”, 12-14<sup>th</sup> Nov ’2009.
11. Participated in the 99<sup>th</sup> Indian Science Congress, section XI: Medical sciences (including Physiology), Bhubaneswar, 3<sup>rd</sup> January – 7<sup>th</sup> January 2012 .
12. Participated in the “National Seminar on Sports Science as an Emerging Discipline in higher Education”, Organised by the Department of Sports science, Ramkrishna Mission Vivekananda University (RKMVU), Belur math, Howrah, held on 17-18 February, 2017.

## **TRAINING & WORKSHOP**

1. Training Course on Flow Cytometry and Cell sorting (BDFACS Aria III), From 28<sup>th</sup> December – 30<sup>th</sup> December, 2011 at BD - CU CoE for Nanobiotechnology, Center for Research in Nanoscience and Nanotechnology (CRNN), University of Calcutta in association with BD Biosciences (India).
2. International Workshop on Current Trends in Resources on biomedical Sciences for South Asian Association of Physiologists (SAAP) Young Scientists, Organised by The

Physiological Society of India (PSI), Calcutta University, Bose  
Institute, IICB, NICED, DIPAS (Delhi), at Kolkata, 19<sup>th</sup> to 23<sup>rd</sup> June, 2012.

3. Six-week certificate course on “ Electrophysiological and Neurophysiological studies including Mathematical Modelling” organized by UGC funded Centre with Potential for Excellence in a Particular Area (CPEPA) held at University of Calcutta on 22<sup>nd</sup> August to 3<sup>rd</sup> October, 2016.
  
4. One day workshop on “Augmenting Writing skills for Articulating Research” organized by the Department of Science and Technology (DST), Govt. of India and Vigyan Prasar (VP) in collaboration with Ramkrishna Mission Vivekananda Centenary College, Kolkata on 17<sup>th</sup> June, 2019.
  
5. Attended 5<sup>th</sup> Hands-on Training Workshop on Laboratory Diagnosis of emerging Viral Diseases conducted by Regional Virus research and Diagnostic Laboratory, ICMR- National Institute of Cholera and enteric Diseases during 17-19<sup>th</sup> July, 2019.