Biographical Sketch

I completed my Postgraduation in Zoology from University of Calcutta in 2002. My research work, done in Department of Pharmacology, Institute of Post Graduate Medical Education and Research (IPGME&R), Kolkata, was based on Immunology in 2011. It deals with the mechanism by which Allylpyrocatechol, isolated from leaves of *Piper betle*, reduces inflammation for which I awarded Ph.D. degree from University of Calcutta. I started my teaching career as a Lecturer in Zoology in 2005. Since 2008, I am associated with West Bengal Education Services (WBES), Government of West Bengal.
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Debjani Sarkar, M.Sc., Ph.D.

Designation: Associate Professor

Present Affiliation: Department of Zoology, Acharya Prafulla Chandra Roy Government College, Siliguri**,** West Bengal (2016 - till date).

Teaching Experience: Undergraduate: 2005 - till date Postgraduate: 2009 – 2015

Colleges served: 1. Barasat Government College (2008 - 2016)
2. Dinabandhu Mahavidyalaya (2005 - 2008)

Area of Interest: Immunology and Molecular Biology

Research Activities:

I.Title of the thesis: Evaluation of the anti-inflammatory properties of Allylpyrocatechol, a simple catechol isolated from *Piper betle.*

II. Research Interest: Bioactive potential of medicinal plants and their mechanism of action

III. Publications in Research Journals:

1. **Sarkar D**, Chakrabarti J. Bioactive potential of the spice blend "Bengali garam masala": an overview. International Journal of Biology, Pharmacy and Allied Sciences. 2020; 9: 2315-2336.
2. **Sarkar D**. The curative role of dietary spices in inflammation. International Journal of Research in Pharmaceutical Sciences. 2020; 11:3402-3411.
3. 3.**Sarkar D**. The anti-inflammatory activity of plant derived ingredients: an analytical review. International Journal of Pharmaceutical Sciences and Research. 2020; 11:496- 506.
4. **Sarkar D**. A Review of the Seeds Comprising Panch phoron, a Spice used in Indian Cuisine. International Journal of Pharmaceutical Investigation. 2019; 9: 25-35.

5. **Sarkar D**. Reflections of animal behaviour: through the Ice Age movies International Journal of Scientific Research and Reviews. 2019; 8: 1160-1178.
6. **Sarkar D**. Anti-inflammatory Properties of some Active Components obtained from Plants. Journal of Biological and Chemical Research. 2019; 36:131-138.
7. **Sarkar D**. Physical And Behavioural Characteristics Of Animals As Learnt From The Animation Film "Bambi". International Journal of Research and Analytical Reviews. 2019; 6: 440-443.
8. **Sarkar D**, Dey Sengupta S. Quantitative estimation of total protein, fatty oil and soluble sugar content in different mutant plant types of Sesamum indicum L. Journal of Pharmacognosy and Phytochemistry. 2019; 8: 1102-1104.
9. Mukhopadhyay S, Chattopadhyay U, **Sarkar D**. Diversity of Butterfly fauna in Barasat, West Bengal. Bionotes. 2015; 17: 47- 49.
10. **Sarkar D**. Rodents-A basic model to study inflammation. Aureole. 2014; 5: 109-117.
11. Hossain E, **Sarkar D**, Chatterjee M, Chakroborty S, Mandal SC, Gupta JK. Effect of methanolic extract of leaves of *Bombax malabaricum* on nitric oxide production during inflammation. Acta Poloniae Pharmaceutica. 2013; 70:255-260.
12. **Sarkar D**, Kundu S, De S, Hariharan C, Saha P, Manna A, Chattopadhyay S, Chatterjee M. The anti-oxidant activity of Allylpyrocatechol is mediated via decrease in generation of free radicals along with escalation of anti-oxidant mechanisms. Phytother Res. 2013; 27: 324-329.
13. Hossain E, **Sarkar D**, Maiti A, Chatterjee M, Mandal SC, Gupta JK. Anti-inflammatory effect of a methanolic extract of leaves of *Dregea volubilis*. J Ethnopharmacol. 2010; 132: 525-528.
14. **Sarkar D***, Saha P*, Gamre S, Bhattacharjee S, Hariharan C, Ganguly S, Sen R, Mandal G, Chattopadhyay S, Majumdar S, Chatterjee M. Anti-inflammatory effect of allylpyrocatechol in LPS-induced macrophages is mediated by suppression of iNOS and COX-2 via the NF-kappaB pathway. Int Immunopharmacol. 2008; 8:1264-1271. (*Joint first author).
15. Dutta A, **Sarkar D**, Gurib-Fakim A, Mandal C, Chatterjee M. In vitro and in vivo activity of Aloe vera leaf exudates in experimental visceral leishmaniasis. Parasitol Res. 2008; 102: 1235-1242.
16. **Sarkar D**, Dutta A, Das M, Sarkar K, Mandal C, Chatterjee M. Effect of Aloe vera on nitric oxide production by macrophages during inflammation. Indian J Pharmacol. 2005; 37: 371-375. (Indian Journal).

IV. Chapter in Books:

1. **Sarkar D**. A review of the bay leaves obtained from *Laurus nobilis* and *Cinnamon tamala* plants. Ethnobotany and Biochemistry of Medicinal Plants. Discovery Publishing House Pvt. Ltd., New Delhi. 2020; 72-84.

V. Presentations:

1. **Sarkar D**. The use of plant products in treatment of heavy metal toxicity. International Conference on Biotechnology and Biological Sciences. Biospectrum 2022. 5^{th} – 7^{th} November, 2022.
2. **Sarkar D**. Potential role of cytokines in the treatment of various diseases. International Conference on Biotechnology and Biological Sciences. Biospectrum 2021. 18^{th} – 20^{th} November, 2021.

3. **Sarkar D**. The use of natural products in downregulating particulate matter-induced inflammation. International Conference on Biotechnology and Biological Sciences. Biospectrum 2020. 19th – 21st November, 2020.
4. **Sarkar D**. Chattopadhyay S, Chatterjee M. Downregulation of NF-kB pathway is essential for the anti-inflammatory pathway of allylpyrocatechol. Intzoocon, Celebrating 100 years of Zoology, University of Calcutta. Dept. Of Zoology, University of Calcutta. 1-3rd Feb, 2018.
5. **Sarkar D**. Chattopadhyay S, Chatterjee M. Downregulation of Reactive oxygen species and upregulation of anti-oxidant enzymes by allylpyrocatechol is responsible for its anti-oxidant activity. Biological Sciences in Human Welfare. Dept. Of Botany, Rishi Bankim Chandra College. 9th July, 2018.
6. **Sarkar D**. Medicinal Plants used for the Treatment of Inflammation. Biodiversity: Exploration, Exploitation, Conservation and Management - Vision and Mission. Post Graduate Dept. of Zoology, Barasat Govt. College in collaboration with The Zoological Society, Kolkata and West Bengal Biodiversity Board. 19-20th Nov, 2016.
7. **Sarkar D**, Chatterjee M. Allylpyrocatechol reduces DNA damage by reducing Reactive oxygen species. International Conference on Environment and Ecology. 2-4th March, 2015 (Oral).
8. **Sarkar D**, Saha P, Hariharan C, Ganguly S, Sen R, Mandal G, Chattopadhyay S, Chatterjee M. Allylpyrocatechol exerts its anti-inflammatory activity by downregulating production of reactive nitrogen intermediates. DST (Govt. of India) and Higher Education Dept. (Govt. of West Bengal) - sponsored national symposium on Dimensions of Animal Researches and Human Need. Dept. of Zoology, Presidency College (Kolkata, W.B., India). September 7 - 9, 2009. (Oral).
9. **Sarkar D,** Manna A, Chaudhuri A, Sengupta R, Ganguly S, Mukherjee S, Chatterjee S, Chatterjee M. Modulation of oxidative stress in erythrocytes from patients with type-2 diabetes by an ethanolic extract of leaves of *Piper betle* (Paan) and Allylpyrocatechol. International Congress of Endocrinology. Rio de Janeiro, Brazil, November 8 – 11, 2008. (Oral)
10. Saha P, Hariharan C, **Sarkar D** and Chatterjee M. "Pro-oxidant activity of Berberine chloride Accounts for its anti-leishmanial activity". Society for Free Radical Research – India (Satellite meeting), New Delhi. February11-12, 2008.
11. **Sarkar D**, Saha P, Sen R, Mandal G, Ganguly S, Hariharan C, Gamre S, Chattopadhyay S, Chatterjee M. Allylpyrocatechol, a simple catechol isolated from *Piper betle* downregulates pro-inflammatory response in murine macrophages. Emerging Trends in Free Radical and Antioxidant Research, Society for Free Radical Research Asia, January 8 -11, 2007, Mumbai, India.
12. Saha P, Hariharan C, **Sarkar D**, Ganguly S, Mandal G, Sen R, Dey S, Saha P, Chatterjee M. Anti-leishmanial activity of *Kalanchoe pinnata i*s mediated via an increased expression of inducible nitric oxide synthase and IL-12p40. Emerging Trends in Free Radical and Antioxidant Research, Society for Free Radical Research Asia, January 8 -11, 2007, Mumbai, India. **Received SFRR-India 10 Best Poster.**
13. Saha P, Sen R, **Sarkar D**, Chatterjee M. "Evaluation of a [Ruthenium III (medtra) (H2O)] complex as an anti-inflammatory agent". XVIth Annual State Conference of Indian Pharmacological Society, Kolkata, January 28, 2006. (Oral)
14. **Sarkar D**, Dutta A, Das M, Sarkar K, Mandal C, Chatterjee M. Leafy exudates of *Aloe vera* mediates its anti-inflammatory activity by decreasing nitric oxide production in macrophages.

XXXVIII Annual Conference, Indian Pharmacological Society, January 14 – 16, 2005, Kolkata, India. **Received Gufic Prize for Best Oral Presentation.**

VI. Workshops attended

(a) As resource person

1. Participated in Preconference Workshop. IPSCON-2009, International Conference on Integrative & Personalised Medicine and 42nd Annual Conference of the Indian Pharmacological Society, Kolkata, India. December 9, 2009.
2. Participated in Re-orientation Training Programme. National Institute of Homoeopathy, Saltlake, Kolkata, West Bengal. February 7, 2009.
3. Participated in the ICMR sponsored Workshop, Dept. of Pharmacology, IPGME&R, Kolkata. September 8-9, 2008.
4. Participated in Preconference Workshop. XXXVII Annual Conference, Indian Pharmacological Society, Kolkata, India. January 13, 200

(b) As participant

1. Participated in Contemporary Laboratory and field courses in Zoological Science. Dept. of Zoology, A.P.C. Roy Government College, Siliguri. November 22 to December 1, 2015.
2. Participated in Workshop on Suggestive Curriculum by UGC on Practical Teaching in Zoology. Dept. of Zoology, University of Calcutta & the Zoological Society, Kolkata. February 24, 2007.

Awards and Fellowships:

1. National Scholarship in B.Sc. Examination, 2000
2. Joint CSIR-UGC National Eligibility Test (Lecturership), 2002
3. State Level Eligibility Test, 2004
4. Lady Tata Memorial Trust Personal Scholarships, 2004-2005

Memberships:

1. Life Member of the Indian Pharmacological Society, India.
2. Life member of the Zoological Society, Kolkata, India.