

## Statement of Research Contributions and Acknowledgment

I, [Dr. S. Jackson Durairaj], hereby affirm that the research work referenced in the list below has not been supported by any fellowship or external funding specifically allocated for these studies. Each paper represents my individual and collaborative efforts in advancing the understanding of regenerative processes, molecular biology, and cellular research. The significant contributions of my co-authors have been crucial to the success of these studies, and their involvement is acknowledged in the respective publications.

### Summary of Key Contributions and Papers:

- 1. Rajagopalan et al., 2024**  
**Title:** *Understanding the multi-functional role of TCTP in the regeneration process of Earthworm, Perionyx excavatus*  
**Contribution:** Investigated TCTP's role in earthworm regeneration, highlighting its potential therapeutic value in regenerative medicine.
- 2. Subbiahanadar Chelladurai et al., 2020**  
**Title:** *Exploring the effect of UV-C radiation on earthworm and understanding its genomic integrity in the context of H2AX expression*  
**Contribution:** Provided insights into the effects of UV-C radiation on earthworm genomic integrity, focusing on DNA repair mechanisms.
- 3. Rossan Mathews et al., 2024**  
**Title:** *Biochemical and functional characterization of heat-inactivated coelomic fluid from earthworms as a potential alternative for fetal bovine serum in animal cell culture*  
**Contribution:** Evaluated earthworm coelomic fluid as a viable alternative to Fetal Bovine Serum for cell culture applications.
- 4. Vivekanandam et al., 2022**  
**Title:** *Designing of cytotoxic T lymphocyte-based multi-epitope vaccine against SARS-CoV2: A reverse vaccinology approach*  
**Contribution:** Developed a multi-epitope vaccine against SARS-CoV-2 using a reverse vaccinology approach, contributing to COVID-19 vaccine development.
- 5. Paul et al., 2022**  
**Title:** *Importance of clitellar tissue in the regeneration ability of earthworm Eudrilus eugeniae*  
**Contribution:** Highlighted the critical role of clitellar tissue in earthworm regeneration, enhancing understanding of tissue-specific regenerative mechanisms.
- 6. Jackson Durairaj Selvan Christyraj et al., 2020**  
**Title:** *Understanding the role of the clitellum in the regeneration events of the earthworm Eudrilus eugeniae*  
**Contribution:** Provided detailed insights into the clitellum's contribution to earthworm regeneration processes.
- 7. Subramaniam et al., 2024**  
**Title:** *Profiling microRNAs of earthworm, Perionyx excavatus and deciphering the*

- expression of distinct novel miRNAs regulating epimorphosis regeneration*  
**Contribution:** Identified novel microRNAs involved in earthworm epimorphic regeneration, advancing understanding of gene regulation in regenerative biology.
8. Rajagopalan et al., 2022  
**Title:** *Comparative analysis of the survival and regeneration potential of juvenile and matured earthworm, Eudrilus eugeniae, upon in vivo and in vitro maintenance*  
**Contribution:** Compared survival and regeneration between juvenile and mature earthworms, offering insights into developmental stage impacts on regenerative potential.
9. Rajagopalan et al., 2024  
**Title:** *The molecular mechanisms underlying the regeneration process in the earthworm, Perionyx excavatus exhibit indications of apoptosis-induced compensatory proliferation (AICP)*  
**Contribution:** Explored AICP in earthworm regeneration, elucidating molecular mechanisms driving regenerative responses.
10. SC et al., 2012  
**Title:** *Autofluorescence in BrdU-positive cells and augmentation of regeneration kinetics by riboflavin*  
**Contribution:** Investigated riboflavin's role in enhancing regeneration kinetics through its effects on cell proliferation and repair.

**Extent of Contribution:**

In all the aforementioned papers, my role primarily involved conceptualizing the research, designing experiments, analyzing data, and interpreting results. I have made substantial contributions to the research methodology, data analysis, and manuscript preparation. The collaboration with co-authors, each contributing their expertise, was essential to the successful completion of these studies.

I acknowledge and thank my co-authors for their valuable contributions to these research endeavors. Their expertise and collaborative effort were instrumental in achieving the outcomes reported in these publications.

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Signature 31-08-2024

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