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INSTITUTE OF SCIENCE AND TECHNOLOGY
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LETTER OF JUSTIFICATION

I am delighted to compose this letter of reference for **Mr. Kamarajan Rajagopalan**, with whom I have been acquainted for the past five years. He is one of the few diligent and astute pupils that I have had the privilege of instructing. In my opinion, Mr. Kamarajan Rajagopalan ranks inside the top 5% of the students I have now educated. In B-Tech, he has done projects regarding reverse vaccinology and successfully, he has raised two articles regarding dengue virus and Covid-19 that was published in Journal of Applied Pharmaceutical Science (IF: 1.37) and Journal of Bimolecular Structure and Dynamics (IF: 4.4). He had done my M-Tech in International Research Center of Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu. In his M-Tech first year, he found that Heat-inactivated coelomic fluid of the earthworm *Perionyx excavatus* is a possible alternative source for fetal bovine serum in animal cell culture and its published in Journal of Biotechnology progress (IF: 2.5). Also, he has filed Indian patent. In second year of his M-Tech, he was trying to understand the molecular mechanism of regeneration of earthworm blastema under the *in-vitro* condition, after a heavy struggle he has successfully developed the protocol for *in-vitro* culturing of earthworm's tissue and organs. He has found the novel modes of earthworm *Eudrilus eugeniae* blastema regeneration under the *in-vitro* conditions. After his M-Tech, he has joined in the NRDMS project as a Project Assistant in Human Genetics and Stem Cell Biology Lab, Bharathiar University, Coimbatore, Tamil Nadu. He has successfully raised 2 articles regarding autism, Covid-19 in the Journal of Genes and Diseases (IF: 6.9) and Science of Total Environment (IF: 8.8).

After successful completion of his NRDMS project, He has joined as a Junior Research Fellow in DST-SERB Project for 2 years under me and he has successfully completed that project and he has contributed as a first and co-author of an articles which

published in the Journal of Tissue Engineering and Regenerative Medicine (IF: 4.4) and Journal of Nature Scientific Reports (IF: 3.8). After the successful completion of SERB project, He has joined as a Senior Research Fellow (SRF) in DST-SHRI Project. He currently working as a Senior Research Fellow (SRF) in DST-SHRI project in the International Research Center of Sathyabama Institute of Science and Technology, Chennai, Tamil Nadu. Recently, he has submitted my PhD thesis entitled on "Understanding the molecular mechanism of regeneration through AICP studies" (Reg no: 2021195101, Submission Date: 12.07.2024).

He has successfully developed the protocol for *in-vitro* culturing of earthworm's tissue and organs like prostate gland, testis and heart. He has found the novel modes of earthworm *Eudrilus eugeniae* blastema regeneration under the *in-vitro* conditions that have been reported on 2022 in the journal of *In Vitro* Cellular & Developmental Biology-Animal (IF: 2.1). From these findings, revealing the original survivability and regeneration ability of earthworm body parts upon *in vivo* and *in vitro*. His PhD is about "Understanding the molecular mechanism of regeneration through AICP studies". He has reported the rulers behind this context, research gaps and future prospects of AICP in the Journal of Apoptosis (IF: 6.1). Also, he has suspect the metal targets for cancer and successful regeneration, it will help the scientific community to conduct the research on those contexts and perform effectively. As per his vision, he has revealed the AICP context which is required for successful regeneration and if the AICP context is missing cause abnormality in earthworm regeneration that have been reported in the Journal of *In Vitro* Cellular & Developmental Biology-Animal (IF: 2.1). It will be revealing the importance of AICP context of research in regeneration will help the scientific community to conduct research in these context for future regeneration therapy.

Totally, He has published 13 articles (Research article: 8, Review article: 5, Conference proceeding: 1; Book chapters: 9), Citations: 1107, H-index: 8. I would strongly recommend him for a Sun Pharma Awards. If you have any queries, please do not hesitate to contact me by email (johnnbt@sathyabama.ac.in).

Yours sincerely

S. Johnson Retnaraj Samuel 31/08/24

Dr. S. Johnson Retnaraj Samuel
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